U K
1937

THE WONDERS OF NATURE AND ART;

BEING AN

ACCOUNT

OF

Whatever is moſt Curious and Remarkable throughout the WORLD;

Whether relating to its

ANIMALS, VEGETABLES, MINERALS, VOLCANOES, CATARACTS, HOT and COLD SPRINGS,

AND

Other Parts of NATURAL HISTORY;

OR, TO THE

BUILDINGS, MANUFACTURES, INVENTIONS, and DISCOVERIES of its Inhabitants.

The Whole collected from the Writings of the beſt HISTORIANS, TRAVELLERS, GEOGRAPHERS, and PHILOSOPHERS, among which are ſome *Original Manuſcripts*; interſperſed with pious OBSERVATIONS and REFLECTIONS; illuſtrated with NOTES, and adorned with COPPER-PLATES.

The SECOND EDITION.

VOL. IV.

LONDON:

Printed for NEWBERY and CARNAN, Sons and Succeſſors to the late Mr. J. NEWBERY, at the Bible and Sun, No. 65. the North ſide of St. Paul's Church-yard.

MDCCLXVIII.

Acc 2014-275
Vol. 4

AC 241
.W66
1768x
v.4

THE CONTENTS.

CHAP. III. Of the EAST-INDIES, and particularly the Empire of the Great Mogul, —— —— —— page 1
Foſſils, —— —— —— 7
Vegetables, —— —— 18
Animals, —— —— 33
Buildings, —— —— 64
Arts, Manufactures, &c. —— 78
Cuſtoms of the Indian Gentoos and Moguls, —— —— 85

CHAP. IV. Of CHINA and JAPAN, 98
Volcanoes, Cataracts, Springs, and Whirlpools, —— —— 99
Foſſils, —— —— —— 103
Vegetables, —— —— 106
Animals, —— —— 126
Buildings, Canals, &c. —— — 133
Arts, Manufactures, &c. —— 148
Remarkable Cuſtoms of the Chineſe and Japaneſe, —— —— 168

CHAP. V. Of the INDIAN ISLANDS, 186
Foſſils, Volcanoes, Springs, &c. — ibid.
Vegetables, —— —— 190
Animals, —— —— 206

PART

PART III. Of AFRICA.

CHAP. I. Of EGYPT, —— 218
The Inundations, Cataracts, &c. of the Nile, —— —— 219
Vegetables, —— —— 229
Animals, —— —— 237
Antiquities, —— —— 251
Buildings, —— —— 289
Arts, Manufactures, —— —— 284

THE

THE

WONDERS

OF

NATURE AND ART.

CHAP. III.

Of the EAST-INDIES, *and particularly the* EMPIRE *of the* GREAT MOGUL.

THE Eaſt-Indies, which are frequently extended to all the countries eaſt of the Red Sea, but more properly are confined to the vaſt tract of land which extends from Perſia to China, were ſo called from the country of India or Indoſtan, which doubtleſs derived it's name from the river Indus, it being ſituated between the Indies and the Ganges, but is at preſent called by the natives Mogulſtan, or the empire of the Great Mogul. This country, though but a part of what is frequently included under the name of the Eaſt-Indies, is two thouſand and forty-three miles in length from the bottom of the peninſula to it's moſt northern extremity; and in the broadeſt part one thouſand four hundred and twelve, from eaſt to weſt, but the moſt ſouthern part of the peninſula does not exceed three hundred and twelve miles in breadth.

A CHAIN of mountains, which runs through the peninsula from north to south, is the cause of a very extraordinary phænomenon in natural history, for the countries separated by these mountains, though under the same latitude, have their climate and seasons intirely different from each other; and, while it is summer on one side of the hills, it is winter on the other. On the western coast, which is usually distinguished by the name of the coast of Malabar, a south-west wind, begins to blow from the sea at the end of June, with continued rain, and rages against the coast for four months, during which time the weather is calm and serene on the coast of Coromandel; and towards the end of October, the rainy season, caused by the change of the monsoon, begins on the coast of Coromandel; at which time the tempestuous winds, bearing continually against the coast, in which there are no good ports, make it so dangerous for ships to remain there, for the three ensuing months, that it is scarce ever attempted. This occasions the periodical return of our ships to Bombay, where there is a secure harbour and convenient dock.

As the tropic of Cancer extends through the middle of this country, the air is exceeding hot, but in the most sultry season, the rains cool the air, and refresh the earth. When these rains set in, a day seldom passes without terrible thunder and lightning; and even during the fair season, they have lightning, though without thunder, for several weeks together; but this lightning does no harm. The heavens are clear and serene, except in the rainy season, and the vernal equinox; for all the rest of the year is exempt from storms and hurricanes, and there are only such moderate breezes, as the heat of the climate requires. The pleasure to be found in the mornings

mornings and evenings is inconceivable! for the ſky not only ſeems to enjoy a more than uſual purity and brightneſs, that is never ſeen in theſe northern latitudes, but the trees retain a perpetual verdure, and you behold bloſſoms and ripe fruit on ſome tree or other, all the year round. However, at the end of the fair ſeaſon, the earth generally reſembles a barren deſart, without one ſpire of graſs or ſhrub; but the ſhowers no ſooner begin to fall, than the earth is almoſt inſtantly covered with graſs and herbs. The ſoil, conſiſting of a brittle, fat mould, is eaſily broken up, and prepared for tillage; and though the ſame land is ſown every year, it is never manured; but is rendered ſufficiently prolific by the annual rains.

THE regular winds on the coaſt of India, which the ſeamen call monſoons, are obſerved to blow conſtantly ſix months one way, and ſix months another; namely, from April to October, or thereabouts, they blow from the ſouth-weſt, and from October to April from the north-eaſt, only varying now and then a point or two on either ſide. The ſhifting of theſe contrary winds, which is called the breaking up of the monſoons, is uſually attended with violent ſtorms or hurricanes, ſuch as we very ſeldom experience in this part of the world, and which render the navigation of the Indian ſeas very dangerous at that time of the year. Beſides theſe periodical winds they have land and ſea breezes, which ſhift once in twelve hours, except the monſoons are violent, for then the breezes give way to the tempeſt; and it is theſe ſea breezes that are ſo refreſhing to the ſouthern parts of India. During the rainy ſeaſon, which continues ſeveral months, the clouds that obſcure the heavens defend the natives from the ſcorching ſun. The reſt of the year they enjoy a pure and ſerene ſky,

free from ſtorms and hurricanes, and ſuch as our climate does not afford us. The trees and plants afford a vaſt variety of the richeſt fruits, and flowers of the gayeſt and moſt lively colours, as well as of the ſweeteſt fragrance, ſo that the ſight, the taſte, and the ſmell, are conſtantly regaled in their delicious gardens.

HAVING mentioned the monſoons, it may not be amiſs, before we proceed farther, to inquire into the reaſon of that extraordinary phænomenon. The cauſe then of theſe periodical winds is owing to the courſe of the ſun northward of the equator one half of the year, and ſouthward the other. While he paſſes through the ſix northern ſigns of the ecliptic, the vaſt countries of Arabia, Perſia, India, and China, are heated, and reflect great quantities of the ſolar rays into the regions of the ambient atmoſphere, by which means it becomes very much rarified, and has it's equilibrium of courſe deſtroyed; to reſtore which, the air from the equatorial parts, where it is cooler, as well as from the colder northern climes, muſt neceſſarily have a tendency or motion towards thoſe parts, and ſo produces the monſoons for the firſt ſix months, during which time the heat of thoſe countries is greateſt. Then for the other ſix months, the ſun traverſing the ocean and countries towards the ſouthern tropic, the air over thoſe parts is moſt heated, and conſequently the equatorial air alters it's courſe, or the winds veer about, and blow upon the oppoſite points of the compaſs.

TO account for another phænomenon, viz. the general trade winds, which do not ſhift as the monſoons do, but blow continually the ſame way, we muſt conſider, that heat, by rarifying the air, makes it lighter in ſome places than it is in others, and cold by condenſing it makes it heavier.

Hence

Hence it is, that in the torrid zone, the air, being more rarified by the rays of the sun, is much lighter than in other parts of the atmosphere, and most of all over the equatorial parts of the earth. Now as the parts most rarified are continually shifting towards the west, by the earth's diurnal rotation eastward, it follows, that those parts of the air which lie on the west side of the point of greatest rarefaction, and flow to meet it, have less motion than the parts on the east of the said point, which follow it; and therefore the motion of the eastern air would prevail against that of the western, and so generate a perpetual east wind, if this were all the effect of that rarefaction. But as all the parts of the atmosphere are greatly rarified over the equator, and those about the poles are greatly condensed by extreme cold, this heavier air from each pole is constantly flowing towards the equator, to restore the balance destroyed by the rarefaction and levity of the air over those regions. This being the case, it is easy to conceive, that by a composition of the two directions of the air from the east and north, a constant north-east wind will be generated in the northern hemisphere, as the two directions from the east and south will produce a constant south-east wind in the southern hemisphere, to a certain distance on each side the equator. And this hypothesis we find to be verified in the general trade winds, which blow constantly from the north-east and south-east to about thirty degrees on each side the line, where the parts are over the open ocean, and not affected with the reflexion of the solar rays from the heated surface of the land; for in that case the air over the sea being cooler sets in

upon the land, as on the coaſt of Guinea, and in other parts of the torrid zone*.

FROM what has been ſaid it is reaſonable to conclude, that ſince ſo large a portion of the atmoſphere as is over the torrid zone, and parts about it, is in ſuch continual agitation and alternate motion, thoſe agitations in an elaſtic fluid (as the air is known to be) muſt extend every way to a great diſtance, and produce effects of the ſame kind in a various manner; by which means the air in all other latitudes and climates will be more or leſs diſturbed, and have a perpetual tendency to motion in various directions, depending on the ſituation of countries, the degrees of heat and cold in the climate, the poſition of hills, vales, &c. beſides what may be owing to the accenſion and exploſion of meteors, the eruption of ſubterranean air, and many other cauſes. This may give us a general idea of the origin of thoſe variable winds that we experience in our own iſland, which blow ſometimes one way, ſometimes another, are now boiſterous, now huſhed, without any regularity, either as to time or place. Navigators do not find the winds variable in the great Pacific, Atlantic, and Ethiopic Oceans, till they are about thirty degrees diſtant from the equator.

---

* Mr. Clare, in his Motion of Fluids, very prettily illuſtrates this matter by the following experiment. In the middle of a wide diſh or veſſel of water let there be placed a water-plate filled with warm water; the firſt will repreſent the ocean, the other an iſland rarifying the air above it. Then holding a candle over the cold water, blow it out, and the ſmoke will be ſeen to move towards the warm plate, and, riſing over it, will ſhew the courſe of the air from ſea to land. If the ambient water be warmed, the plate filled with cold water, and the ſmoaking wick of a candle held over the plate, the contrary will happen.

FROM

FROM these observations, which the mention of the monsoons on the coasts of India seemed naturally to introduce, we now proceed to consider the most remarkable productions of the country, beginning with those that belong to the mineral kingdom.

FOSSILS.

OF all the bodies of this class that the Indies afford, the diamond deservedly claims our first attention, as it exceeds all other gems in value, hardness, and lustre. The diamond, in it's most perfect state, is clear and pellucid as the purest water, and is eminently distinguished from all other substances, by it's vivid splendor and the brightness of it's reflexions. However, it is not unfrequently found tinged with a yellowish, blueish, reddish, and sometimes a greenish cast, by the accidental mixture of some metalline particles; but the tinges are usually slight, and in these states it is extremely different from other gems of those colours, being of infinitely greater lustre. The diamond is found of various sizes, but generally small, the large ones being very seldom to be met with*; and as it's size is uncertain and irregular, it's shape is much more so; but all it's varieties of

* The largest diamond ever known to have been found in the world is that in the possession of the Great Mogul, which weighs 279 carrats, each carrat being four grains. Tavernier computes the value of this diamond to be 11,723,278 French livres, equivalent to 779,244 pounds sterling. That of the Great Duke of Tuscany, weighing 139 carrats, and that in France called the grand sancy, weighing 106 carrats, (the name sancy being a corruption of cent six) which is one of the crown jewels, are two of the heaviest that we know of in Europe.

figure are found no way to affect the internal ſtructure of the body, which by the microſcope appears to conſiſt of a great number of parallel plates or tables extremely thin, and laid over one another with the utmoſt regularity.

DIAMONDS are found in the Eaſt-Indies chiefly in the kingdoms of Golconda, Viſapour, Bengal, and the iſland of Borneo. The diamond-mines are generally adjacent to rocky hills and mountains, and ſometimes the diamonds are found ſcattered in the earth within two or three fathoms of the ſurface. In other places they ſink through rocks to the depth of forty or fifty fathoms, till they come to a ſort of mineral earth, in which they find the diamonds incloſed. This earth is ſometimes of a yellowiſh and ſometimes of a reddiſh colour, and adheres to the ſtone ſo ſtrongly, that it is difficult to get it off. A ſufficient quantity of this earth being dug out of the mine, it is thrown into a ciſtern of water, where having ſoaked for ſome time, it is ſtirred about till the clods are broken, and the gravelly matter falls to the bottom. After this a vent is opened, the foul water let out, and the ciſtern ſupplied with clean, till all the earthy ſubſtance be waſhed away, and nothing but gravel remains. What thus ſettles at the bottom is ſpread to dry in the ſun, then ſifted, and afterwards carefully ſearched with the hands to find out the diamonds; at which they are ſo expert, that the leaſt bit of a ſtone can hardly eſcape them. It ſometimes happens however, that the earth is ſo fixed about the diamonds, that before they are rubbed on a rough ſtone with ſand, their tranſparency cannot be diſcovered.

IN the kingdom of Golconda, or in that of Viſapour according to ſome maps, are the mines of Raolconda, which have been diſcovered above two

two hundred years. The earth here is ſandy and full of rocks, and in theſe rocks are found ſeveral little veins, half an inch or an inch broad, out of which the miners, with hooked irons, draw the ſand or earth that contains the diamonds, breaking the rock when the vein terminates, that the track may be found again and continued. To ſeparate the diamonds from this earth, it undergoes ſeveral waſhings, and other operations, as we have already obſerved. The miners work quite naked, except a thin covering over their privities, and, beſides this precaution, have likewiſe inſpectors to prevent their concealing the diamonds; which yet, notwithſtanding all this care, they ſometimes find opportunities of doing. Tavernier ſays, he ſaw one detected who had put a ſtone into the corner of his eye; but ſwallowing a diamond is a ſurer and more uſual method amongſt them. If the miners meet with a ſtone of fifteen or ſixteen carrats, they are allowed a reward, beſides their uſual pay, which is very little. The king has two per cent. for all the diamonds that are ſold, and alſo a duty from the merchants according to the number of hands employed in digging.

THERE are other mines at Gani or Coulour in the kingdom of Golconda, wherein they find diamonds from ten to forty carrats and upwards, but they are not very clear, their water being uſually tinged with the colour of the ſoil, which in ſome places is yellowiſh, in others black and moiſt, and in others reddiſh. Another defect of ſome conſequence is a kind of greaſineſs appearing on the diamond when cut, which takes off part of it's luſtre. Here the miners dig to the depth of twelve or fourteen feet, where they find water, which prevents their going farther. The

earth is carried from the mine by women and children into a neighbouring inclosure, where it is washed, and then dried and sifted. According to Tavernier, there are generally sixty thousand persons, men, women, and children, employed in these mines of Coulour. They work naked like the miners at Raolconda, and are watched in the same manner by inspectors.

A GREAT number of diamonds are found near Soumelpour, a large town in the kingdom of Bengal, situated on the river Goual. From this river all our fine diamond points or sparks, called natural sparks, are brought, where they search for them after the great rains are over, that is, after the month of December. At that season, when the water is grown clear, eight or ten thousand persons, of all ages and sexes, come out of Soumelpour and the neighbouring villages, and examine the sand of the river, going up it to the very mountain from whence it springs. After this examination they proceed to take up the sand wherein they judge diamonds likely to be found, which is done in the following manner. Having made a dam round the place with earth, stones, fascines, &c. the river being then very low, they lade out the water, and dig about two feet deep, carrying the sand into a place walled round on the bank of the river, where the process is much the same as at the mines above-mentioned, and the workmen are watched with equal strictness. — As to the diamonds of the island of Borneo, they are found in the sand of the river Succadan or Succadano, and perhaps in some other parts of the island, with which we are little acquainted.

TO bring diamonds to that perfection, in which their beauty consists, the diamond-cutters begin by rubbing two rough diamonds against each other,

other, after having well cemented them, to the ends of two blocks called cutting ſticks, thick enough to be held in the hand. By this means they rub off the dull outer cruſt, and reduce them to form, in order to their being poliſhed; and this powder, thus rubbed off the ſtones, and received in a little box, ſerves to poliſh the ſtones. Diamonds are poliſhed by means of a mill, which turns a wheel of caſt iron, ſmeared with diamond duſt, mixed with oil of olives. This wheel moves horizontally, and before the diamonds are applied to it, they are ſoldered into pieces of metal prepared for that purpoſe *. But diamonds are more expeditiouſly divided by finding the grain of the ſtone, as it is called, that is, the diſpoſition of the laminæ or plates of which it is compoſed, and introducing between them the point of a fine chiſſel. When this is properly done a ſtone will ſplit as evenly as a piece of talc, and give two diamonds

* To diſtinguiſh diamonds from all other ſtones, whether counterfeit or natural, Dr. Wall ſeems to have found an infallible method. He obſerves that a diamond, being ſlightly rubbed in the dark with any ſoft animal ſubſtance, as the finger, woollen, ſilk, or the like, appears luminous through it's whole body. If the ſun be eighteen degrees below the horizon, and any one holds up a piece of bays or flannel ſtretched tight between both hands at ſome diſtance from the eye, and another rubs a diamond ſwiftly and pretty hard on the other ſide of the bays or flannel, the light is much more vivid and pleaſant to the eye of him that holds it than any other way. But what the doctor judges moſt ſurprizing is, that a diamond, being expoſed to the open air in view of the ſky, without rubbing, gives almoſt the ſame light of itſelf, as if rubbed in a dark room; and if in the open air you hold your hand or any thing elſe over it, to hinder it's communication with the ſky, it gives no light at all. The doctor tried all or moſt of the other precious ſtones, but could find no ſuch phænomenon in any of them; ſo that this may be looked upon as a diſtinguiſhing criterion of a diamond.

or more, if the thickneſs will allow it, of the ſame breadth or ſurface with the original one. The ſplitting a diamond ſometimes anſwers another end, when the ſtone has a flaw or blemiſh in it, which greatly debaſes it's value; for by ſeparating the plates at a proper depth, the flaw may be removed.

THE making artificial diamonds has been attempted lately with great ſucceſs. The beſt of what is called paſte, come very near the luſtre of the diamond, and, in this reſpect, can only be diſtinguiſhed from the true by thoſe who are accuſtomed to view genuine diamonds. They, however, are greatly inferior to them, in point of hardneſs.

DIAMONDS, beſides being uſed as ornaments, are of ſervice in the glaſs trade, for they alone will cut glaſs. Thoſe uſed by glaziers, are ſet in an iron ferril, about two inches long, fixed in a handle of box or ebony; and thoſe uſed for cutting looking-glaſs, &c. are called plough diamonds, and are fitted into a kind of plane.

THE carbuncle is a very beautiful gem, found only in the Eaſt-Indies, ſo far as is yet known, and there but very rarely. Its colour is a deep red, reſembling that of a ripe mulberry, and going off, where paleſt, into a ſtrong ſcarlet, not into the purpliſh or violet tinge of the ruby and garnet; but when held up againſt the ſun it loſes it's deep tinge, and becomes exactly of the colour of burning charcoal, from whence it ſeems to have obtained it's name. It is generally found pure and faultleſs, and is naturally of an angular figure, ſmaller at one end than the other, which end tapers to a point like a pyramid, and is more finely coloured than the lower part of the column. It is of the ſame degree of hardneſs with the ſapphire,

phire, which is second only to the diamond; and it bears the fire unaltered, not losing it's colour, or becoming at all the paler for the trial. This has been experienced by some of our jewellers, who, disliking it's too deep colour, have endeavoured to render it more vivid and striking to the eye, by divesting the gem of a part of it, but always without success. Many authors have confounded the carbuncle with the ruby, and determined that every ruby which exceeds twenty-four carrats is properly a carbuncle; but the two gems are essentially different.

THE true ruby, in it's most perfect state, is a gem of great beauty and value, and to be found only in the Indies, the principal mines of it being in the kingdom of Pegu and in the island of Ceylon. It's colour is red, in very different degrees, but always with a greater or less admixture of purple. It's size is various, but the most common is that of a large pin's head, though it is sometimes met with of eight or ten carrats, and even twenty or thirty; nay we have accounts of some that weigh more than a hundred. It is never of an angular shape, but always of a pebble-like figure, and is commonly so naturally bright and pure on the surface as to need no polishing, but it is often debased by blemishes or foulness, which very much diminish it's value. Our jewellers distinguish this gem into several species, calling them by different names, according to their different degrees of colour. Thus, besides the ruby simply so called in it's most perfect state, they have the spinel ruby, the balass ruby, the rock ruby, and the rubacelle; but these two last are not in reality of the ruby kind, the first being a beautiful species of garnet, having an admixture of blue with its red, and the other of the hyacinth,

hyacinth, having a faint tinge of yellow. — It is ſaid the inhabitants of Pegu have the art of heightening the redneſs and luſtre of rubies by laying them in the fire, and giving them the proper degree of heat.

THE hyacinth of the antients was a gem of a purple colour tending to a blue, being indeed a variety of the amethyſt; but the modern hyacinth is of a red colour, with an admixture of yellow, and though it be not ſo gaudy as the other red gems, the fineſt ſpecimens of it are very beautiful. It is of various ſizes, from that of a hempſeed to that of a nutmeg; and it's ſhape is not leſs uncertain, being ſometimes found in an hexangular column terminated pyramidically, and at others in form of a roundiſh, or oblong, and generally ſomewhat flatted pebble. This gem is found in ſeveral parts of Europe, but the fineſt of them, like all other precious ſtones, are the product of the Indies. When it is of a pure and bright flame-colour, which is its moſt perfect ſtate, the jewellers call it Hyacintha la Bella; and they diſtinguiſh two or three other kinds, to which they give different names, according to their different tinges of red or yellow.

THE garnet, the ſapphire, the amethyſt, and the opal, though all of them found in the greateſt perfection in the Eaſt-Indies, have been already taken notice of in the courſe of this work, and therefore need no farther deſcription; but there are two or three other gems produced in the countries we are now ſurveying, which are too beautiful to eſcape our obſervation. The emeralds of India are evidently finer than thoſe of any other part of the world, but being ſcarce, and at preſent found only in the kingdom of Cambaya, very few of them have of late been imported into Europe,

rope, moſt of thoſe which our jewellers call oriental emeralds being brought from America. The emerald in it's pureſt ſtate perhaps yields to none of the gems in beauty, being of a bright and naturally poliſhed ſurface, and of a pure and charming green without the mixture of any other colour. It is found of various ſizes, but uſually ſmall, though ſome are met with as big as a walnut. The accounts we have of an obeliſk, a table, &c. of one intire emerald, are evidently erroneous, the ſtones having been jaſpers, or other ſtones of a green colour.*. This gem, like the diamond, is of different figures, being ſometimes of a roundiſh form, and ſometimes of a columnar one; but thoſe of the former ſhape are always the hardeſt and brighteſt. The emerald loſes it's colour in the fire, and becomes undiſtinguiſhable from the white ſapphire, which name the jewellers give to all the harder gems when colourleſs.

THE beryl is another gem produced in ſome parts of Europe and America, but thoſe of the Eaſt-Indies are far ſuperior to the others in the fineneſs of their colour and luſtre. It is always of a tolerably bright and poliſhed ſurface, and it's colour is a mixture of blue and green, making exactly what we call a ſea-green, from whence the moderns have given it the name of Aqua marina. In its fineſt ſtate it approaches to the hardneſs of the garnet, and is a very beautiful

* A great deal of errror and confuſion about the emerald had crept into the world in the time of Pliny, who has a long liſt of different kinds of this gem, among which are evidently jaſpers, coloured cryſtals, and ſpars, which he miſtakes for emeralds. Even at this day, moſt of thoſe we meet with under the name of occidental emeralds are only tinged cryſtal, brought from the mines of Germany.

gem,

gem, but is at preſent of no great value. It is found of various ſhapes and ſizes, but ſeldom very ſmall, and generally in hexangular columns terminated by pyramids of the ſame form, which ſtand in cluſters of twenty or more on the rugged prominencies of rocks in the cracks and fiſſures of the ſtrata. We are told that the beryl is ſometimes found in pieces large enough to form fine vaſes, and that there are many ſuch in Cambaya, Pegu, and Ceylon; but theſe accounts are certainly owing to ſome ſuch miſtake as we have obſerved has been made with reſpect to the emerald.

THE topaz of the moderns, which is undoubtedly the chryſolite of the antients, is a very beautiful and valuable gem in it's pureſt and moſt perfect ſtate; but ſuch are rarely to be met with, and the leſs perfect ones are of little value. Thoſe of the Indies are the fineſt in the world, but they are generally ſmall, being ſeldom found bigger than the head of a large pin, though now and then one arrives at a ſixth of an inch in diameter. The form of the topaz is always that of the pebble, roundiſh or oblong, uſually flatted on one ſide; and it's ſurface is uneven, but conſiderably bright, and of a good natural poliſh, unleſs it have contracted ſome accidental foulneſs. The fineſt topazes are of a true golden colour, but they vary from this up to the colour of the deepeſt ſaffron, and down to that of the paleſt amber. They have a luſtre at leaſt equal to any gem except the diamond, and being diveſted of their colour by fire they reſemble it very nearly; but the more common ſort of topazes are dead and heavy. This gem is eaſily counterfeited, and there are factitious ones which by the eye can ſcarce be diſtinguiſhed from thoſe that are natural; our jewellers

jewellers alſo frequently call thoſe topazes, which are only coloured cryſtals.—Tavernier mentions a topaz in the poſſeſſion of the Great Mogul, weighing 157 carrats, which coſt 20,300l. ſterling, and is the fineſt gem of this kind that ever was known.

THERE remains a very ſingular and beautiful gem to be deſcribed, viz. the aſteria or cat's eye, which ſomething approaches to the nature of the opal, in having a bright included colour, that ſeems to be lodged deep in the ſtone, and ſhifts about as it is moved in various directions; but in all other reſpects it differs from the opal, particularly in it's want of the variety of colours, and in it's ſuperior hardneſs. It has only two natural colours, a pale brown and a white, the brown being the ground, and the white playing about in it like a lucid ſpeck; but in ſome ſtones that have more of the white, inſtead of this ſpeck or ſtar, one whole ſide always appears whiter than the other. Beſides theſe natural colours, this gem is liable, like moſt others, to ſome accidental tinges, ſome pieces of it being greeniſh, bluiſh, and yellowiſh; but they are the worſe for theſe variegations, never ſhewing the included light ſo clearly. It does not vary ſo much in ſhape and ſize as ſeveral of the other gems, being uſually found between the ſize of a pea and the breadth of a ſixpence, and of a ſemicircular form, convex at the top, and flat at the bottom. It is conſiderably hard, and is naturally of a ſmooth and bright ſurface; ſo that it is ſeldom wrought, but worn with it's native poliſh. The Eaſt-Indies, and particularly the iſland of Borneo, afford very fine gems of this kind; and they are alſo frequently found both in Europe and America.

HERE

HERE we might add a deſcription of the various kinds of agate, jaſper, onyx, and other ſemi-pellucid gems that are found in the Eaſt-Indies; but as moſt of theſe have been already ſpoken of, it would only lead us into needleſs repetitions, and therefore we leave the mineral kingdom, to proceed to that of

VEGETABLES.

AMONGST the many vegetable productions of the Eaſt-Indies, perhaps none is of more general uſe, or makes a more conſiderable article of commerce, than pepper, which is the fruit of a plant or ſhrub growing plentifully in Malabar, Malacca, and other parts of the continent, as well as in ſeveral of the Indian iſlands. The plant is weak and of the reptile kind, ſo that it is ſet at the roots of large trees, round which it twiſts and climbs like hops. It's leaves in figure reſemble thoſe of ivy, but are larger, and not ſo green, of a ſtrong ſmell and pungent taſte. In April it bears a white flower, after which the pepper comes forth in ſmall cluſters like our currants, being green at firſt, and becoming red in proportion as they ripen, and at laſt black when they are quite ripe, which is in November or December. The cluſters are then cut off and dried for a fortnight on mats in the ſun, till the pepper falls off from the ſtalk; during which time they are often turned, but covered in the night-time becauſe of the dew. It is ſaid the plant bears no fruit till the third year, when it produces ſix or ſeven pounds; and the two following crops are much the ſame, after which it increaſes both in quantity and ſize till the twelfth year, when it bears no more, and a new ſhoot is planted in it's room.

room. — Pepper is diſtinguiſhed into two kinds, the black, and the white, which Pomet and others will have to be the fruit of two different plants; but M. Dillon, a celebrated phyſician, and author of the hiſtory of the Inquiſition of Goa, aſſures us, that all the difference between the white and black pepper is, that the latter has it's ſkin, which is taken off from the former by beating it before it is quite dry, or after it has been ſoaked in water.

THERE is another kind of pepper growing in the Eaſt-Indies, called long pepper from it's form, which in length and thickneſs equals a child's finger. It conſiſts of an aſſemblage of grains or berries ſticking cloſe together, of a browniſh colour, bordering on red without, and on black within. The plant that bears it is like that of the common pepper, but it's leaves are ſmaller and greener; and as to the fruit itſelf, it's taſte is leſs ſharp than the former. It is chiefly uſed in medicine, being an ingredient in ſeveral Galenical compoſitions, particularly Venice treacle.

THOUGH rice is not peculiar to the Indies, yet being the principal grain of thoſe countries, and throughout the Eaſt, it ſeems more proper to mention it here than in any other place. It is the ſeed of a leguminous plant, growing in cluſters, being terminated with a beard, and ſeverally incloſed in yellow capſulæ or caſes. When ſtript of their ſkin the grains appear almoſt oval, of a ſhining white colour, and as it were tranſparent. In the Indies the women thraſh and dreſs all the rice, which is a very painful office. — This grain, which is the food of at leaſt two thirds of mankind, is undoubtedly a very wholſome aliment; and as to what has been ſaid, that living much upon rice is injurious to the eyes, and brings on blind-

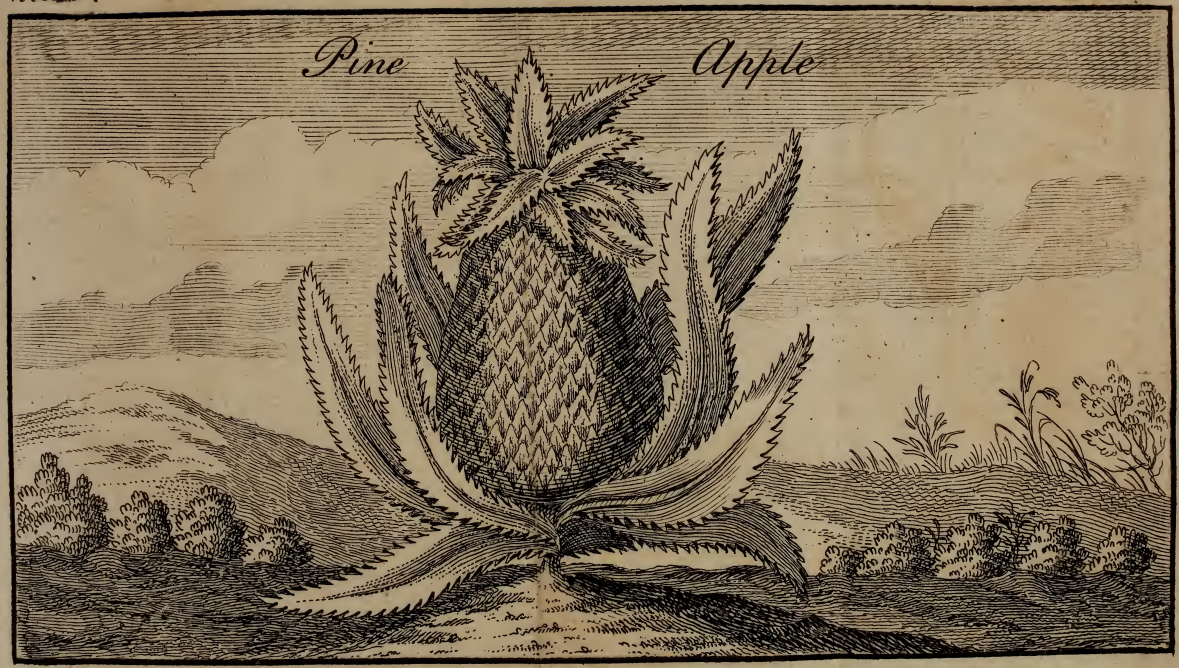
neſs

neſs, the judicious look up it as a vulgar error*.

THE anana, or pine-Apple, as we call it from the reſemblance it bears to the cones of pines and firs, is a moſt delicious fruit, which grows ſpontaneouſly in the warm parts of the Eaſt-Indies, as well as in America. It is the product of an herbaceous plant with leaves like an aloe, and the top of the fruit is adorned with a little crown and a bunch of leaves reſembling a fire. The pulp is fibrous, but diſſolves in the mouth, and has the fine taſte of the peach, the quince, and the muſcadine grape, all together. It is ſaid the Indians make a wine of the juice which is almoſt equal to malmſey ſack, and will intoxicate as ſoon. The fruit is eſteemed cordial, good againſt a nauſea, raiſes and exhilarates the ſpirits, and provokes urine; but is not proper for women with child, being apt to occaſion abortion. A confection of the ananas is made in the countries where it grows, which is found of ſervice to reſtore a decayed or broken conſtitution. Great endeavours have lately been uſed to cultivate the plant in Europe, which have been attended with ſuch ſucceſs, that very fine fruits of this kind are now pro-

* This error, we are told, is founded on an obſervation made by the ſailors, that fowls carried on ſhip-board from the American continent to Jamaica, which are fed on rice during the voyage, are very ſubject to become blind; but nothing is more common than to aſcribe effects to wrong cauſes, and this is probably owing to ſome other cauſe, in which rice is not at all concerned; for we do not find that the inhabitants of theſe countries, where rice is the almoſt conſtant and principal food, are more ſubject to blindneſs than the people of Europe.

duced


Pine Apple

duced in England in the gardens of the curious *. They are usually about the size of a tennis-ball, but some are much larger.

THE coco or cocoa-tree is one of the most remarkable and useful productions of the Indies. This tree, which the Malabarians call tenga, grows straight without any branches till near it's summit, and usually to the height of thirty or forty feet. The leaves, which are of a great length, and terminate in a point, serve the Indians to cover their houses with, and for many other purposes. Above the leaves arise several shoots as thick as a man's arm, and on the top of all grows a large excrescence in form of a cabbage, excellent to eat, and far exceeding our finest cabbages in flavour. From the sides and upper parts of the cabbage there likewise shoot out clusters of pods, containing some small kernels, tasting exactly like the English walnut. The nuts, which are the fruit of the cocoa-tree, hang in clusters four or five together, and are as big as a man's head when at full growth. Before

* The author of Spectacle de la Nature informs us, that some years ago M. le Normand gave the French king two suckers of a pine-apple, recommending their cultivation to his care, though they were almost withered, and had not any roots. The heart however was good, and they happened to take; but though their fruit could not be brought to it's proper maturity, yet two suckers in the year 1733 produced two pine-apples of admirable beauty. The assiduity used in their culture, in conjunction with a favourable autumn, raised them to a perfect maturity. The king himself tasted one of them the latter end of December, and found it excellent; and all those persons, to whom his majesty thought fit to send part of these fruits, unanimously agreed that they were compleatly ripe, had a delicate melting pulp agreeably quickened by a fine acid, and were as richly perfumed as a strawberry.

tl ey

they are ripe they contain a clear cooling water or milk, which in time condenſes to a pulp, and becomes an excellent food; and it likewiſe affords an oil, equally good either for the lamp or the table. The ſhell of the nut is made into bowls, ſpoons, and ſeveral other utenſils; and in the kingdom of Siam they are uſed as meaſures for things either dry or liquid. From the cocoa-tree the Indians extract a liquor called ſuri, which is of a grateful taſte, and intoxicates like wine. It is pretty ſweet when newly extracted, but in a little time becomes more acid; and from this liquor is diſtilled a water or ſpirit that burns in the fire like brandy. The ſuri, we apprehend, is the ſame liquor that ſome authors mention under the name of toddy, from whence Mr. Lockyer aſſures us they diſtil the ſpirit we call Arrac, which is the Indian word for all ſtrong waters *. The method of obtaining the ſuri is by making an inciſion in the top of the capſule that bears the flowers or fruit, and about four inches below they make an oblique inciſion in the bark, from whence the liquor drops into a veſſel hung to receive it. What is obtained in the morning is ſweet and pleaſant, and even more delicious than the milk of the nut; but that in the evening is ſomewhat acid, the next day it grows ſourer, and on the third day it is intirely acid and without any ſweetneſs at all. In order to make vinegar of this liquor, they put the veſſels that receive it

* Goa and Batavia are the chief places for arrac. What is made at Batavia is much the ſtrongeſt, but that of Goa is preferred to all others on account of it's peculiar and agreeable flavour; which is attributed to the earthen veſſels uſed at Goa to draw the ſpirit, whereas at Batavia they uſe copper-ſtills.

among

among lime for fifteen days, by which a violent fermentation being excited, much froth thrown up, and a whitiſh matter ſubſiding to the bottom, the ſuri is changed into vinegar. A ſort of ſugar called jagra, is likewiſe prepared from the ſuri, by putting into it a ſufficient quantity of lime to tinge it of a reddiſh colour. The liquor is then boiled, and ſtirred continually till it is inſpiſſated; whereby a red ſugar is produced, which they render white by repeated diſſolutions and boilings. —As to the medicinal virtues of the cocoa, the ſuri is ſaid to be highly beneficial to phthiſical patients, or thoſe who labour under any diſorder of the kidneys, or a difficulty of diſcharging their urine. The liquor contained in the nut is good to extinguiſh thirſt, purifies the blood, cleanſes the ſtomach, affords much nouriſhment, and is an excellent drink in biliary fevers.

THERE is a remarkable ſpecies of palm-tree called areca, which is common in Siam and other parts of the Indies. The trunk of this tree is ſtrait and without branches like the cocoa, its leaves grow in the ſame manner, and it bears a fruit with a green covering of the bigneſs and ſhape of a pullet's egg. This covering or rind conſiſts of numerous fine filaments running lengthways from the ſtalk to the head, under which is contained the fruit or nut, externally of a browniſh colour, ſhaped like a nutmeg at one end, but flattiſh at the other. It is white within, and marbled with purpliſh veins, but has very little taſte. The Indians chew this nut wrapped up in a betel-leaf, with lime made of calcined ſhells, which they affirm to be a mixture of a grateful taſte, ſtrengthening the gums, and promoting digeſtion.

THE betel or betle, juſt now mentioned, is a plant that grows in all the Indian provinces on the

the ſea-coaſt. The Indians chew it in the morning, afternoon, and evening, and carry it about with them almoſt continually; but they uſe the nut and lime with it to qualify its bitterneſs. Some of the rich people uſe it with camphire, and others with aloes-wood, muſk, and ambergriſe. It is ſaid to ſtrengthen the gums, and to corroborate the heart, ſtomach, and brain. If chewed immediately after breakfaſt, it renders the breath agreeable; but it blackens the teeth, though they fancy it contributes greatly to preſerve them.

THE lacca-tree, which grows in Malabar, Pegu, and other parts of India, is remarkable for the gum it yields, called lacca or lake, which is red, brittle, and clear, uſed in dying, painting, &c. Authors indeed differ as to the production of this curious drug, ſome imagining it to be a juice drawn from the tree by inciſion, whilſt others, and particularly father Tachard, affirm, that a kind of little ants, fixing themſelves on the branches of the tree, leave behind them a reddiſh moiſture, which being hardened by the air and ſun becomes lacca. M. Geoffroy, examining this gum, found it to be a ſort of comb, ſuch as bees and ſome other inſects are accuſtomed to make. Upon breaking it into pieces it appears divided into a multitude of little cells of an uniform figure, which plainly ſhew that it never ouzed from trees. Nor are theſe cells mere excrements, as ſome have imagined, but are intended for ſomething to be depoſited in them; and accordingly are found to contain little bodies, which the firſt obſervers took for the wings or other parts of the inſects that produced the lacca. Theſe bodies are of a beautiful red colour, and, when broken, make a powder as fine as cochineal. It is moſt probable that the cells are deſtined to lodge the young brood,

brood, and that the little bodies found in them are the embryo's of insects, or perhaps their skins. This is lacca in its natural state, but to prepare it for use they pound it in a mortar, and boil it in water to a proper consistence, after which part of the water is evaporated by the sun, and the thickened tincture strained through a linen cloth. Besides this, there are several artificial pastes used by painters, which go by the name of Lake or Lacca.

THE Lignum Aloes, or Aloes wood, much used in the east as a perfume, has its name from its bitterness, which resembles that of the aloes juice. This wood is extremely valued, and divers strange stories have been invented as to the origin of the tree that yields it, some feigning it grew only in paradise, and was swept away by the deluge; whilst others assert, that it grows in deserts, and on inaccessible rocks and mountains, guarded by wild beasts, &c. The Siamese ambassadors to the court of France in 1686, who brought a present of this wood from their emperor, first gave the Europeans a consistent account of it. The tree grows in Lao and Cochinchina, and is much of the same size and figure of our olive-trees. The trunk consists of three sorts of wood, very different in colour and properties, that which lies immediately under the bark being black, solid, heavy, and almost like ebony. The second, which is a light veiny wood, and of a tan-colour, is the Calambac or true aloes-wood, which is brought to us from Surat, in considerable quantities. The heart, or innermost part, call'd Tambac, is more valued by the Indians than gold itself, and is therefore very scarce and dear. The Calambac comes to us in small pieces, of a yellowish-brown colour, with black or purple-colour'd

resinous veins interspersed, and is of a bitter, hot, aromatic taste; and when cast on the fire it melts like wax, and yields a very fragrant scent. It is not only used as a perfume, but esteem'd a sovereign remedy in palsies, deliquiums, weaknesses, &c. Chewing this wood, or rinsing the mouth with a decoction of it, sweetens the breath, according to Dioscorides; and the weight of a dram, powder'd and drank in some proper liquor, cures the excessive humidity, relaxation, and burning heat of the stomach, commonly call'd the Heart-burn. It likewise relieves those afflicted with a dysentery or gripes, or with pains of the side or liver.

IN the province of Tatta, in the dominions of the Great Mogul, there grows a wood call'd lignum dulce or sweet wood, though indeed it is rather a weed, no part of it being useful but the root, which is a good ingredient in perfumes; and therefore great quantities are exported from Surat to China, where it bears a good price; because, when beat to a powder, it is burnt in the incense-pots before their idols.

THERE is a gum or resin, sometimes call'd asa dulcis, but commonly benzoin or benjamin. This is obtain'd by incision from a tree growing in the East-Indies to a considerable height and thickness, and bearing leaves like those of the lemon-tree, but smaller and not so green. The gum, as brought to us, is generally very foul, sometimes of a reddish, and sometimes of a yellowish colour, of an agreeable taste and aromatic smell. The true benzoin, brought into France by the ambassador of Siam's retinue, was externally yellowish, but white within, and intermix'd with small reddish veins. It differ'd very much from the benzoin in tears,

tears, as it is call'd, which is a clear transparent mass, of a reddish colour, and mix'd with white spots resembling broken almonds, whence it has the name of amygdaloid benzoin. The druggists have another sort, which is often counterfeited by a fusion of several gums together; and there is a black kind of benzoin, without any smell, which is absolutely to be rejected.—This gum is much used in perfumes, and most authors agree that it is of a warming, drying, discussing, dissolving, and purifying nature, resisting putrefaction, and good against disorders of the breast and lungs. Externally it is used in all fragrant compositions; for it proves cordial by its agreeable smell, fortifies the senses by its steam, dissipates defluxions, and cures the tooth-ach.

IN several parts of the Indies the tamarind-tree grows plentifully, which bears a tart agreeable fruit by some call'd Indian dates, and by others the Indian Acacia. The bark of this tree is not unlike our ash or walnut-tree, and its leaves resemble those of the female fern. Its flowers are join'd eight or ten together, like those of the orange-tree; and its fruit is in a pod the length of one's finger, and somewhat thicker, cover'd at first with a green rind, which afterwards becomes brown, and contains a blackish acid pulp, among which are found seeds resembling lupines. This pulp is used in medicine, being gently laxative, cooling, and proper to quench thirst, and therefore very serviceable in burning fevers. Tamarinds are also good in diarrhœas, and are commended in a flux of the hæmorrhoids from a bilious and acrimonious blood.

WE have another sort of medicinal fruit brought from the East-Indies, call'd myrobalans, which were more used among the ancients than the

moderns, and are at present more esteem'd abroad than in England. There are five kinds of this fruit, the first call'd the Indian or black myrobalans, which are more slender and narower than any of the rest, with eight ridges upon the superficies. These have no stone, are rough, hard, black both within and without, and of a sub-acid and astringent taste. The second is the citron or yellow myrobalan, which is a pentagonal rough fruit about the size of an olive, having an angular stone included under a carnous bark. The third sort is the chebule myrobalan, a rough pentagonal fruit with five ribs on its surface, including a cavernous stone under a fleshy bark like the former. The fourth is call'd the belleric myrobalan, which is a round and somewhat angular fruit, about the bigness of a large gall, and containing a hard stone. The fifth, call'd the emblic myrobalan, is a black sexangular fruit, flat at each end, and easily separating into six parts, containing a white hexagonal stone, divided into six cells. All these kinds are gently purgative and astringent, and are therefore very proper in diarrhœas and dysenteries.

THE plant from whence Indigo is drawn grows in several parts of the Mogul's dominions, as well as in America. It somewhat resembles rosemary, and rises to the height of three or four feet, some say six or seven, bearing a flower like that of the thistle, and having a seed like fenugreek. When the plant is arrived at a certain height, and the leaves are in a good condition, they are stripp'd from the stalks, and thrown into large pits, (as Tavernier informs us) half fill'd with water. Here they are bruised and stirr'd about till the water appears very thick and muddy, and after a few days setting the water is drawn off, and the slimy sediment

ment taken up in baſkets, which is made up in pieces ſhap'd like children's tops, or in flat cakes, and afterwards dried in the ſun. The people employed to ſift the indigo ſtop their noſtrils, keep a cloth before their faces with little holes for their eyes, and drink milk every half hour, to preſerve them from the penetrating quality of the duſt; which, notwithſtanding all their precaution, makes them ſpit blue for ſome time after*.

THIS is the method of making indigo at Zirkes, (or Serquech, as Thevénot calls it) a large village near Amadabat, which is reckon'd as good as any in the world; but ſome travellers give us a different account of its preparation in other places. The leaves of the plant (they ſay) are thrown into a kind of vat, and cover'd with water, in which they are boil'd for four and twenty hours, and a ſcum ſwims on the top with all the different colours of the rainbow. The water is then drawn off into another veſſel, where it is briſkly ſtirr'd about till it becomes of a deep green, and till the grain (as they call it) forms itſelf. This they diſcover by taking a little of it out, and ſpitting in it; for, if that occaſion a bluiſh matter to ſubſide, they leave off ſtirring the liquor. The matter then precipitates itſelf to the bottom of the veſſel; and, when it is well ſettled, they pour off the water. After this they take out the indigo, and put it into linen bags to drain; which done, they put it into ſhallow wooden boxes, and, when it begins to dry, they cut it into ſlices, and let them harden in the ſun.—Indigo is much uſed by painters

* *Tavernier* tells us, he placed an egg one morning near the ſifters of indigo, and found the contents of it quite blue when he broke it in the evening.

and dyers, and it is of some use in medicine, particularly in stopping of fluxes, being a very strong astringent*.

In Malacca, besides the common fruits of the Indies, they have the rambostan, another fruit about the size of a walnut, with a tough skin cover'd with capillaments, and containing a very savoury pulp.—The durean is another excellent fruit of that country, which indeed is offensive to the nose, but most grateful to the palate. Its rind is thick and yellow, and its pulp looks like cream, but is more delicious. It is warm and nourishing, and strengthens the stomach.—There is likewise plenty of mangoes, and particularly a species call'd stinkers, being very offensive both to the smell and taste.

We had almost omitted one of the most remarkable trees that India produces, namely, the banian-tree, so call'd from the veneration it is held in by the banians †, a religious sect in that part of the world. The branches of this tree bend down to the ground, where the slender twigs take root and grow upwards; the branches of these bend down

* This drug was formerly thought to be possess'd of a poisonous quality, and was accounted of so corrosive a nature, that the electors of *Saxony* prohibited the importation of it into their territories.

† The *Banians* believe a metempsychosis, or transmigration of souls from one body to another, and will therefore eat no living creature, nor even kill noxious animals, but endeavour to release them if they see them in the hands of others. They are so fearful of having communication with other nations, that they break their cups if one of a different religion has drank out of them, and empty the water out of a pond where he has wash'd himself. Nay it is said, that, if they happen to touch one another, they must wash and purify before they eat or enter their own houses.

likewise,

likewiſe, take root, and grow up again; and by this means what was originally but one tree will ſpread over a vaſt ſpace of ground, and become a multitude of trees, forming by the manner of their growth very delightful arbours and arches. *Thevenot* ſaw one of theſe trees at Surat, which he ſays was very large and high, affording a moſt ſpacious ſhade, being of a round form and four-ſcore paces in diameter. The branches, which had taken root irregularly, were cut with ſo much art, that one might walk about underneath them without the leaſt inconvenience. The heathen natives frequently make uſe of theſe trees as places for their idols, and retirements for their penitentiaries and other perſons, who ſeem in a more particular manner to be devoted to the exerciſe of religion.

IN the woods of Cambodia, Capt. Hamilton informs us, there grow certain trees with a thick bark of a very poiſonous quality, inſomuch that the natives uſe it to poiſon the ſlugs they ſhoot at elephants or other wild beaſts, which certainly kills them, if they do not miſs their mark. The captain obſerves, that this ſubtil poiſon has another ſtrange quality, that if men are hungry or thirſty, (as is often the caſe in the woods) they ſqueeze a few drops of it on a leaf of a tree, and if they barely lick the leaf it gives immediate refreſhment, but, if the juice touch any part where the ſkin is broke, it proves mortal without remedy.

WHAT we call nux vomica is the ſtone of the fruit of a tree growing in malabar and ſeveral other parts of the Eaſt-Indies. The fruit is as big as an orange, and very ſlimy; and, as vaſt quantities of them rot on the ground, it makes the water that runs through the woods very unwholſome. This ſtone or ſeed is round and flat, of a

grey mouſe-colour without, and of various colours within; ſometimes yellow, ſometimes white, and ſometimes brown. It is extremely narcotic and virulent, exciting inquietudes, convulſions, tremors, and irregular reſpiration; and therefore is not, or at leaſt ought not to be, uſed in medicine. It is chiefly employ'd in poiſoning dogs, cats, and other animals, by a barbarity peculiar to mankind.

WE might here enumerate many other vegetable productions of the Eaſt-Indies, particularly cotton, which grows there in great abundance; but two ſpecies of this plant or ſhrub have been already deſcribed. There is another ſort, however, in ſome parts of India, which grows to the height and thickneſs of a large tree, of which the fruit when ripe is near as big as a hen's egg, and then burſts like that of the ſhrub, diſcovering a fine white down or cotton. The fruit hangs about the middle and ends of the branches, and commonly two together.

WE might alſo deſcribe the guava or goyave, a ſort of plum-tree very common in the Indies, whoſe fruit is much admired by the natives; and likewiſe the mango-tree, the fruit whereof is brought to us pickled; the bamboo or cane-tree, a large kind of reed growing on the ſea-ſhore, which the Indians eat while it is tender, or pickle it in vinegar; and to theſe a great many more might be added: But the reader will remember, that our buſineſs is not to give an account of all the productions of a country, but only of thoſe which are moſt curious and remarkable; and this we have endeavour'd to do, ſo far as relates to the vegetables of the continent, for ſeveral others are reſerv'd to be ſpoken of when we come to treat of the Indian iſlands.

ANI-

The
Elephant

ANIMALS.

AS we forbear ſpeaking of the lion till we come to Africa, though likewiſe an inhabitant of Aſia, it ſeems natural to begin this article with the elephant, the largeſt of all quadrupeds, and a creature in many reſpects deſerving our attention. Great numbers of theſe animals are found in ſeveral parts of the Eaſt-Indies, and are uſually from eight to fifteen feet in height, and their backs are five or ſix feet broad, and ſomewhat protuberant. The elephant has a round thick body, a large ſhort head, and a ſhort neck; a long proboſcis, ſnout, or trunk, hanging almoſt down to the ground; a little narrow mouth, with two long tuſks proceeding from the upper jaw, one on each ſide of the proboſcis, beſides four ſtrong grinders in each jaw, ſmall piercing eyes, large flat ears, and a tail like that of a hog, with a tuft of hair at the end. Its legs are round and thick, ſupporting its vaſt weight like ſo many columns; and its feet are ſhort, thoſe before being broader and rounder than thoſe behind, each of them defended by five flat horny riſings, which ſeem to be the extremities of the toes. Its ſkin is very hard, eſpecially on the breaſt; its colour is generally duſky or black, but there is a white ſpecies, not ſo common as the others: they are all without hair, and full of ſcratches and ſcars.

THE proboſcis or trunk of the elephant is of ſuch a ſtructure, that he can extend or contract, dilate, raiſe or depreſs, and bend or twiſt it about at pleaſure. Sometimes he makes it of a concave, ſometimes of a convex form; now doubles it, again expands it, and in ſhort turns it round every way with ſurpriſing agility. It reaches to the

ground, and, what is very extraordinary, the extremity of it can open and ſhut, ſo as to take up any thing, as a ſhilling lying flat upon the earth, or a grain of muſtard-ſeed. By this member he takes in his meat and drink, and conveys them to his mouth; by this he takes up a vaſt weight, levels trees, and makes uſe of it as a hand upon all occaſions*; and it alſo ſerves for the purpoſe of ſmelling and reſpiration. The proboſcis is likewiſe of ſingular ſervice to the ſhe-elephant in bringing up her young; for it is very remarkable, that the old one ſucks herſelf, and by means of her trunk conveys the milk into the mouth of the young one. And herein we may obſerve the wiſe contrivance of the Author of nature, the nipples of the elephant being placed about the breaſt, and not near the hinder legs, as in mares, cows, and other quadrupeds; for, the young elephant not being able to ſuck its dam by reaſon of the poſition of its mouth under the proboſcis, the nipples are ſituated ſo as to be reached by the mouth of the dam, and thereby proviſion made for the nouriſhment of her offſpring.

THE grinders of the elephant are of ſuch a thickneſs, both in the upper and lower jaw, as contributes to render the mouth narrow; nor need it be broader, becauſe the ſtrength of the grinders is ſo great, as to comminute the aliments at once in

* It is really wonderful to obſerve how nimbly the elephant moves his trunk, conſidering its bulk, being ſix or ſeven feet long, and three feet or more in circumference at its origin, but growing ſmaller from thence to its extremity. The ſhortneſs of the elephant's neck is compenſated by the length of this member, which Dr. *Derham* ſays is ſo admirably contrived, ſo curiouſly wrought, and applied with ſo much agility and readineſs by that unwieldy creature to its ſeveral occaſions, that he thinks it a manifeſt inſtance of the Creator's wiſdom.

ſuch

ſuch a manner, that they do not want to be moved to and fro in the mouth, in order to be farther maſticated, as is uſual with other animals; and therefore the tongue is ſmall, ſhort, and round, not thin and flat, as in an ox, and has a ſmooth ſurface.

As to the tuſks of the elephant, which are what we call ivory, the male has larger than the female, ſome of them being ſeven or eight feet long, and weighing a hundred, a hundred and forty, or a hundred and fifty pounds; inſomuch that *Tavernier* tells us they make door-poſts of them in the Indies, and it is related, that in the kingdom of Laos they make fences with them round their gardens. The ſame traveller ſays, that the elephants of Ceylon have no tuſks, except the firſt which the female produces; and this ſeems to be confirm'd by Mr. *Knox* in his account of that iſland, who ſays that few elephants there have tuſks, and thoſe only the males.

HISTORY informs us, that elephants were uſed in war by the ancients, and ſo they are at this day by ſeveral of the Indian princes*. *Tavernier* was told that the Great Mogul keeps three or four thouſand elephants; but the chief maſter aſſured him he had not above five hundred, which were kept to carry women, tents, &c. and eighty or ninety for war. This indeed is a great number of tamed

* This animal, being of great bulk and ſtrength, has ſometimes made great havock amongſt an enemy in the field of battle; but whether any of them were ever ſo large as to carry thirty-two fighting men on their backs, as is related in 1 *Maccab.* vi. 37, beſides a man to govern them, is much to be doubted. It is more probable, as ſome learned men have obſerved, that ſome error has crept into the impreſſion; for tho' *Philoſtratus* ſpeaks often or fifteen *Indians* fighting with darts in caſtles on the backs of elephants, and *Paulus Vincta* ſays that

ones, from whence we may conclude there is a vaſt number of wild ones in his dominions, beſides thoſe in other parts of the Indies, particularly in the kingdom of Pegu, where we read of four thouſand taken at one hunting; but we are apt to think ſome abatement ſhould be made in this account.

RIDING on elephants is eſteemed a piece of ſtate that becomes none but the great, and is principally appropriated to the Mogul himſelf, the princes of the blood, the great officers of the crown, and the nabobs or viceroys of provinces; and nothing can ſurely be more adapted to ſtrike the mind with awe, and raiſe the impreſſions of pomp and grandeur, than one of theſe enormous beaſts, richly capariſoned, and bearing on its back a kind of canopied throne, in which the perſon who ſits in ſuch majeſtic ſtate, is fully conſpicuous from ſuch an eminence. Theſe unwieldy animals are, however, growing into diſuſe for war ſince the more prevailing uſe of fire-arms, and its being diſcovered, that, notwithſtanding their amazing docility, it is impoſſible to break and train them to the field ſo perfectly, as to be certain they will not do more miſchief to thoſe to whom they belong, than to the enemy; eſpecially when exaſperated with wounds, to which their prodigious

---

that in the *Ginger Iſlands* they have wooden caſtles on elephants backs containing fifteen or twenty men, yet even theſe accounts appear romantic to *Bochart*, and to all who are capable of judging in this matter. We rather believe (with Mr. *Blair*) what *Heliodorus* ſays, that the towers on the backs of elephants contain'd ſix fighting men, who threw darts from each ſide; or what *Cadamuſius* relates, that the towers held three or four warriors; which accounts agree well enough with what *Ælian* ſays on the ſubject, and with the uſual height and bulk of the animal.

bulk

bulk renders them a mark hard to miſs. There are, however, ſeveral elephants in the army of the Mogul, that will not only ſtand fire, but ſuffer a great gun to be diſcharged from their backs. Thoſe they carry are about five feet long, placed on a ſquare wooden frame, that is faſtened to a broad thick pannel, tied on with ſtrong cords and girths. At the four corners of the frame, are four ſilk flags, fixed to ſmall ſtaves. The man who guides the elephant, is ſeated upon his neck, and has an iron rod in his hand, about half a yard long, ſharp at the lower end, and an hook turned up, with which he pricks him forward, or pulls him back. The gunner is ſeated on the wooden frame, where he has his ammunition and ball, with every thing neceſſary for loading and firing. The balls diſcharged from theſe guns are about the ſize of a tennis-ball.

THE natural food of the elephant is graſs, and when that is wanting they dig up roots with their tuſks. They have a very acute ſenſe of ſmelling, whereby they readily find out their food, and avoid all noxious herbage. When they are tamed they eat hay, oats, barley, or ſuch other food as horſes and oxen do; and they drink clear water readily enough, though they naturally affect that which is muddy. They drink a vaſt quantity, ſucking it up by the trunk, as we have already obſerv'd, and thence conveying it to the mouth. It appears to have been a cuſtom to give them ſpirituous liquors when they went to battle, in order to make them drunk and furious*.

* See the firſt book of *Maccabees*, ch. vi.

THE

THE elephant is said to live to a great age, even to a hundred and twenty, two hundred, or three hundred years; nay, there are some who affirm that they live to be five hundred years old, and that at two hundred years they are full of strength and vigour. Some of these numbers exceed all probability, though the longevity of the animal is not disputed. *Tavernier*, who travelled into India, tells us he never could learn exactly how long the elephant lived, but that he was told by one of the keepers, that he knew such an elephant to have been in his great grandfather's, grand-father's, and father's custody, which he modestly computes not to have been less than a hundred and twenty or thirty years. Mr. *Blair* allows, that the elephant generally lives to a great age, though it is an animal subject to several distempers.

As to the manner of the elephant's procreation, all agree that it is a creature of extraordinary modesty, and never copulates in the sight of any one. The time when they begin to copulate is likewise uncertain, though from their usual term of life it is conjectur'd that many of them do not begin till the twentieth year of their age, though others may do it much sooner. The time of their going with young is also disputed, nor is there any way of knowing it but by observing when they separate themselves from the herd, the male and female going apart for the sake of coition, and not returning till the female is impregnated. The female never admits of fresh embraces till a considerable time after she has brought forth her young, which she carries two years.

THE elephants take great care of their young, rather chusing to lose their own lives than that they should lose theirs. They always go in herds, the largest foremost; and, when they are to pass a river,

river, they lift the young ones acroſs on their two tuſks, twiſting the proboſcis round their middle. When they find any of their ſpecies dead in the woods, they cover the carcaſe with branches of trees, graſs, or what elſe they can get; and, if one of them is wounded, the reſt take care of him, bring him food, and run together to ſave him from the hunter.

THERE are different methods of taking wild elephants, one of which is to dig a deep pit, and cover it with boughs and graſs, that an elephant may fall into it as he goes along. Another is to drive them into a narrow place, made ſo ſtrong with poſts and rails, that they cannot get out of it, and then they employ the tame elephants to bring them to reaſon. Two of theſe will get a wild one between them, and beat him with their trunks, till they have rendered him quite tame. If after this he refuſes to do as he is bid, they make ſigns to the tame ones, who immediately correct him, and oblige the poor animal to obey.

HISTORY affords us ſeveral inſtances of the love, fidelity, and gratitude of the elephant, which are very ſurprizing. Ælian relates, that, when Porus, king of India, was ſubdued by Alexander the Great, he was wounded with ſeveral darts, which the elephant he rode upon pull'd out of his body with his proboſcis, and, when he perceiv'd his maſter fainting by the loſs of blood, gradually lean'd himſelf down till he fell flat upon the ground, that his maſter might receive no harm by alighting. Athenæus mentions the gratitude of an elephant to a woman that had done him ſome ſervice, and uſed to lay her child near him when it was very young; for, the mother dying, the elephant was ſo fond of the child, that he ſhew'd great uneaſineſs when it was taken out of his ſight, and would not eat his food

food unleſs the nurſe laid the child in the cradle between his feet, but then he would eat heartily. When the child ſlept, he chaced away the flies with his Proboſcis, and when it cried he would toſs or rock the cradle till it fell aſleep.—But, as elephants are remarkable for their love and gratitude, ſo they are ſubject to reſentment. Acoſta writes, that, a ſoldier in Cochin, a town on the coaſt of Malabar, having thrown a nut at an elephant, the beaſt took it up and hid it; and ſome days after, the elephant, ſeeing the ſoldier paſs by, threw the nut in his face, making a great noiſe, and going away leaping and dancing. Another ſoldier in the ſame town, meeting an elephant with his keeper, would not give way to them; whereupon the keeper complain'd of the affront to the elephant, who, ſome time afterwards ſpying the ſoldier by the ſide of the river that runs through the town, ran haſtily towards him, lifted him up with his trunk, and plunged him ſeveral times in the river; after which he drew him out, leaving him to be laugh'd at by the ſpectators.

To theſe accounts we ſhall add one of a more modern date, from Captain Hamilton, who obſerves, that, when he was at Achen, in the iſland of Sumatra, where they are very numerous, he ſaw one that had been kept there above a hundred years, but by report was then three hundred years old; he was about eleven feet high, and was remarkable for his extraordinary ſagacity, of which he gives an inſtance in a comical piece of revenge he took on a taylor. In 1692, ſays he, a ſhip, named the Dorothy, commanded by Captain Thwaits, called at Achen for refreſhments, and two Engliſh gentlemen in that city went on board to furniſh themſelves with what European neceſſaries they had occaſion for; and, amongſt other things, bought

The Rhinoceros

bought some Norwich stuffs for cloaths, and, there being no English taylor to be had, they employed a Surat, who kept a shop in the great market-place, and had commonly six or ten workmen sewing in his shop. It was the elephant's custom to reach in his trunk at doors or windows as he passed along the side of the street, as begging for the decayed fruits and roots, which the inhabitants generally gave him. One morning as he was going to the river to be washed, with his rider on his back, he chanc'd to put his trunk in at this taylor's window, and the taylor, instead of giving him what he wanted, pricked him with his needle; the elephant seemed to take no notice of the affront, but went calmly on to the river, and was washed; after which, he troubled the water with one of his fore feet, and then sucked up a good quantity of the dirty water into his trunk, and passing unconcernedly along the same side of the street, where the taylor's shop was, he put in his trunk at the window, and blew his nose on the taylor with such a force and quantity of water, that the poor taylor and his journeymen were blown off the table they work'd on, almost frightened out of their senses; but the English gentlemen had their cloaths spoiled by the elephant's comical but innocent revenge.

HAVING given such a particular account of this half-reasoning animal, as Mr. Pope calls the elephant, it is time to take a view of another very remarkable quadruped found in the East-Indies, namely, the Rhinoceros. Its body is pretty near as large as an elephant, but his legs are much shorter, and he has a horn on his snout, which sufficiently distinguishes him from all other animals. The head is of a long make, having a hollow between the forehead and the horn. The snout seems design'd to turn up the earth, in order to find the roots of plants;

plants; it being very pliable, and ending in a point, which it can turn upwards, downwards, or sideways; the noſtrils are placed on each ſide of it, and the lower lip is almoſt ſquare, with the two corners on the ſides of a lively fleſh colour. The eyes are ſmall and placed pretty forward on each ſide of the head. It has large ears which ſtand erect on the top of the head. The whole animal is covered with a thick, rough, chapped ſkin, of an aſh-colour, with plaits and folds, in all ſuch parts as are neceſſary to allow the creature motion, falling one over another backwards. It has no knobs all over its body as expreſs'd in ſome figures, except on the hinder quarters, which receive its weight when it lies down, and they are very large. The tail has a few black hairs at its end, and there are alſo a few ſcatter'd hairs on the ears; but on the other parts there are none. The back is hollow, and the belly ſinks down pretty much. The feet are round behind, and the hoofs before are divided into three parts on each foot, with two little hoofs on the hinder part, as in cows, deer, and ſheep. The horn is different from that of all the other animals, with which we are acquainted, it being intirely ſolid. He rolls himſelf in the dirt like a hog, and the old ones are ſaid to be ſo ſtrong, as to be able to toſs up a large bull.

THIS ſpecies of the Rhinoceros is chiefly to be found in the Eaſt-Indies, but there is another kind with two horns which are natives of Africa, and abound at the Cape of Good-Hope. The colour of the ſkin of theſe is of a dark brown nearly approaching to black, and is alſo without hair; it is covered with ſcars and ſcratches like thoſe of an elephant, and is ſo tough and thick, that it is hard to be pierced even with a ſharp-pointed knife. The ſnout reſembles that of a hog, but is more pointed

pointed at the end. The horn on the nose is of a greyish brown, bending towards the head, and is of different sizes, according to the age of the animal, but never exceeds two feet. He has another on his forehead, in a right line with that on the nose, which is of a yellowish colour, and never exceeds six inches in length, hollow, and in the form of a half bowl inverted. This second horn hinders the animal from doing all the mischief he otherwise might, because it serves, in some measure, to break the stroke of the other.

HIS ears are small, and his legs shorter than those of the elephant, with which he is at perpetual enmity, and, wherever he surprizes him, rips open his belly with the horn on his front. He catches the scent of any creature that is to the windward of him, and marches towards it on a right line, grunting and tearing his way through all opposition of trees and bushes. He never attacks a man but when he is provoked, unless he wears a red coat, in which case he rends and destroys every thing that stands between him and the object of his rage; if he seizes him he throws him over his head with great violence, and then feeds upon him by licking the flesh off the bones with his rough and prickly tongue. His eyes are very small, and he only sees strait forward: though he is pretty swift of foot, he is very slow and aukward in turning. The way therefore to avoid him is to suffer him to come within eight or ten paces of you, and then to slip a few paces aside, by which means he loses sight of you, and it costs him a great deal of aukward trouble to get you again in his view. He feeds chiefly on shrubs, broom, and thistles.

THE flesh of the Rhinoceros is eaten by the Dutch, at the Cape of Good-Hope, and is in high

high eſteem. They make cups of the horn, which are mounted with gold or ſilver; and are firmly perſuaded, that, when wine that is poiſoned is poured into them, they will cleave in two. The chips made in turning one of theſe cups are carefully ſaved, they being eſteemed of great ſervice in expelling poiſon, and alſo in convulſions, faintings, and other diſorders.

THE Porcupine is a four-footed animal found in ſome parts of the Indies, about the ſize of a pig five or ſix months old, and remarkable for the hard quills or prickles with which it is cover'd, from two or three to eleven or twelve inches in length, ſtreak'd with black and white alternately. They are ſhaped like the ſtalks of corn, but ſwell a little towards the middle, and terminate in a point with two ſharp ſides*. Theſe quills are ſo many weapons or darts, which the animal erects with a menacing air on the approach of an enemy, and ſhoots them with ſuch violence that they ſtick in the fleſh of the creature that aſſaults him, the ſockets of the quills thus detach'd from his body being in time fill'd up by others.

* There is a conſiderable ſimilitude between the porcupine and the hedge-hog, which is a little animal well known amongſt us, intirely cover'd with prickles an inch and a half long, very like thoſe which ſhoot from the ſhells of cheſnuts. When he is apprehenſive of danger, he draws himſelf as round as a foot-ball, ſo that nothing is ſeen but his prickles, and thus he ſaves himſelf from the aſſaults of dogs and other enemies. He alſo makes another uſe of his pointed armour, for, when he meets with apples or other fruits under the trees, he rolls himſelf amongſt them, and ſo carries off his load to his cell. What takes up moſt room, or is apt ſooneſt to decay, he eats firſt, and endeavours to have a reſerve of nuts for the latter ſeaſon; but the ſeverity of the winter he paſſes in ſleep.

IN

The Porcupine

In several parts of the Indies, but chiefly in the kingdom of Golconda, there is a kind of goats, in whose stomachs is generated a medicinal stone call'd Bezoar, composed of several Laminæ or coats like an onion, and said to be endued with a power of resisting poison. These stones are of different shapes and sizes; some are form'd like a kidney, or French bean; others are round, oblong, and of an irregular figure. The buds of a certain shrub, on which the animal brouzes, are sometimes found in the middle of it, and supposed to be the basis whereon it is formed. It consists of a greenish or olive-colour'd substance, diversified with white streaks, which run through the whole body of the stone; and when broken between the teeth it adheres to them like a gently glutinous matter, and gives a little tinge to the Saliva. The larger the stone, the more valuable it is held, its price increasing like that of the diamond; but perhaps its rarity, and the peculiar manner of its formation, have contributed more to its reputation, than any intrinsic worth. Many circumstances indeed contribute to render the medicinal virtues of bezoar precarious, and not easy to be determin'd, as the uncertainty of procuring that which is genuine, it being much adulterated*, as is said, even in the Indies; not to mention the large quantities that are

* There are three methods of trying whether bezoar be sophisticated. One is to steep it three or four hours in lukewarm water; if the water be not tinged, nor the bezoar lose of its weight, it is genuine. A second is to prick it with a hot iron, and, if the heat makes it fry and blister, it is a proof of its being adulterated with resins. A third method is to rub it over a paper smear'd with chalk or quick-lime; if it leave a green tinge on the former, or a yellow one on the latter, it is reckon'd a proof of its purity.

made

made in Europe, in imitation of the true orential bezoar. Again, the exceſſive price it uſually bears makes it inconvenient to exhibit it in a great number of caſes, and that in ſufficient quantities, and thoſe long enough continued, to determine whether the virtues attributed to it are real or imaginary; and yet without this teſt it is not poſſible to reaſon accurately or concluſively about it. However, at preſent it begins to be leſs eſteemed, and many able phyſicians quite diſcard it, as of no manner of uſe or efficacy.

BESIDES the bezoar abovementioned there is another ſort call'd hog or boar bezoar, being found in the gall-bladder of a boar in the Eaſt-Indies. In figure and ſize it reſembles a filbert, though more irregular; it is moſt commonly white with a blueiſh tinge, is ſmooth and ſhining, and is valued at ten times its weight in gold. The Indians attribute infinite virtues to this bezoar, but value it chiefly on account of its being a ſovereign remedy in a diſeaſe they are liable to, not leſs dangerous than the plague in Europe.—There are alſo porcupine and monkey bezoars, which ſome ſay are found in the gall-bladders of thoſe animals; but *Tavernier*, who calls them malacca ſtones, ſays they are taken from the heads of the monkey and porcupine, and that they are held in ſuch eſteem by the natives of malacca, that they never part with them, unleſs as preſents to ambaſſadors and the greateſt princes. But, notwithſtanding theſe diſtinctions, the form, colour, and properties of theſe three bezoars are ſo much alike, that it is more than probable they are all the ſame ſtones under different denominations.—As to the occidental bezoar, it is taken from the ſtomach of an American deer, and is eaſily known from the oriental, by being of a paler colour. There are likewiſe

wiſe bezoars found in the ſtomachs of certain cows, which are larger than thoſe of goats, but leſs eſteem'd.

After this long account of the bezoar, it will be proper to take ſome notice of the ſerpent-ſtone, which is ſuppoſed to be found in the head of the Hair-Serpent, and to be an infallible cure for the bite of any kind of ſnake: but this is probably a miſtake, for Mr. *Kolben*, after killing many of thoſe ſerpents, and ſearching the heads of them very narrowly, in order to find this ſtone, could never diſcover any ſuch thing. The ſerpent-ſtones in the poſſeſſion of the Cape Europeans are all artificial ones, brought from India, where they are prepared by the Bramins, who are alone poſſeſſed of the ſecret of their compoſition; yet are highly valued. The above author obſerves, that he ſaw one of them tried upon a child at the cape, who had receiv'd a poiſonous bite in one of its arms, but it could not be diſcover'd from what animal. When the ſtone was brought, the arm was prodigiouſly ſwell'd and inflam'd; on applying the ſtone to the wound it ſtuck to it very cloſely, without any bandage or ſupport, drinking in the poiſon, till it could receive no more; when dropping off, it was put in milk, that it might purge itſelf of the poiſon; and it did ſo, the poiſon turning the milk yellow. The ſtone was then again applied to the wound, and when it had drank in it's doſe was again laid in milk, and this was repeated till the ſtone had exhauſted all the poiſon; after which the arm was ſoon healed. The artificial ſerpent-ſtone is ſhaped like a bean, the matter in the middle is whitiſh, and the reſt of a ſky blue.

The muſk animal is by ſome call'd the muſk goat, and by others is compared to a hart, though it

it is properly neither of the goat, nor deer kind; for it has no horns, and it is uncertain whether it ruminates or not. It is very common in several parts of the East-Indies. It has tusks like those of a hog; is three feet six inches in length, from the head to the tail, and the head is above half a foot long. The fore part of the head resembles that of the greyhound, and the ears, which are three inches long, are erect like those of the rabbit, but the tail does not exceed two inches in length. The hair of the head and legs is half an inch long, but on the buttocks it is three inches in length, and much thicker than in any other animal. On the head and thighs it is brown, but, under the belly and tail, white, and a little curled. This hair is remarkable for its softness and fine texture. The tusks, which are partly for defence, and partly for feeding, are two inches and a half long, terminating in a point, and turning back in the form of a sickle; with these it turns up the earth, to gather roots, and with these also it strips off the bark of trees. The foot is deeply divided into two toes, and as many heels of equal size. The bag which contains the musk, is three inches long, two broad, and stands out an inch and a half from the belly. It is a fearful animal, and its sense of hearing is so quick, that it can discover an enemy at a great distance. As it has only a single bag, a vast number of these animals must be annually killed to supply all Asia and Europe with that commodity. However, the dealers in musk have the art of making the quantity of four or five bags out of one; so that it is much doubted whether we have any of it brought pure into Europe.

MUSK is at present of much greater use in medicine, than it was formerly; for since we have been informed by travellers, that musk was given in china and tonquin against the epilepsy, madness, and

and all diſorders of the nerves, it is become more in uſe, and given in large doſes. It has been found efficacious in madneſs and diſeaſes analogous thereto; and perhaps it is owing to its dearneſs that it is not brought into univerſal uſe.

THE Civet-Cat is not properly of the cat-kind, for the ſhape of the head, and the number of the teeth, reſemble thoſe of the wolf, dog, and fox. It is of different colours, but is commonly of an aſh-colour, ſpotted with black; though it is whiter in the females, and the ſpots are larger, but under the throat and belly are black. The muzzle is long like that of a fox; the ears are ſmall and roundiſh, and the hair like that of a badger. It has whiſkers near the noſe, its eyes are black, and the dog-teeth ſharp and a little pointed. The body has ſome reſemblance to that of a hog, and is a palm in breadth from the back to the belly. It has ſmall feet, and very ſhort legs. The bag in which the civet is contained, is in the middle between the anus and pudendum, both in the male and female. However, in the male, it is much larger. The perfume this animal produces is of the conſiſtence of honey, and ſeems to be extracted from certain glands, which lie between the coats that compoſe the bag, from which the civet is taken*. This bag has an opening made

* Before any Civet-cats had been ſeen in Europe, or it had been obſerved how the perfume was gathered, it was ſuppoſed by ſome to be the teſticles, and by others to be the ſweat of the animal, and the common opinion, founded on the relation of travellers, was, that it was the ſweat of the animal irritated and kindled into rage. To this end, it was ſaid, they incloſed the creature in an iron cage, and, after having beat him a long time, they gathered with a ſpoon, through the bars of the cage, from between his thighs, the ſweat or foam which the rage and agitation had produced; and this was thought to be the civet: but experience has now taught us better.

by a chink from the top downwards. The Dutch settled in the Indies bring up a considerable number of these creatures, and furnish us with part of our civet. This is taken from time to time, as the receptacle fills, and abounds in proportion, as the animal is fed. It is said they feed them with rice-milk or pap, to render the perfume of a good consistence.

THE woods, in some parts of the Indies, are filled with monkeys, apes, and baboons, several species of which are too well known in England, to require a particular description; we shall only therefore mention those of an extraordinary kind.

ONE of the most remarkable animals of this sort is the Orang Outang, so called by the Indians, which signifies the man of the wood. When standing up, he is about the height of a boy of three years old, and of the thickness of one of six, square made, very strong, and exceeding nimble. The joints are well knit, and the muscles large. The fore part of the body is quite naked, but behind he is covered with black hair. He resembles a man in the face, but is flat-nosed, and his countenance is wrinkled, like that of a toothless old woman. The ears exactly resemble those of a human being, as do also the upper parts of the body; and the females have two large breasts. On the belly, it has a deep navel, and all the joints exactly resemble those of a man; as do likewise the fingers, thumbs, and toes. He has calves on his legs; in general he walks on his hind feet, and will take up and carry a heavy burden. It is confidently asserted, that, in the island of Borneo, these animals will attack an armed man, and seize a defenceless woman, whom they will sometimes carry into the woods, and ravish. We are told by *La Compte*, that, in the

the Streights of Malacca, he saw apes or monkies, four feet high, that seemed to walk naturally on their hind feet. Their faces were shaped like those of the Hottentots at the Cape of Good-Hope, but their bodies were covered with a kind of wool, which was in some white, in others black, and in others grey. They made a noise like young children, and their passions were expressed, in a very lively manner, in their faces. They seemed of a very tender disposition, and would kiss those they were fond of. *Pere Cabasson* brought up one of those animals, that was so fond of him, that he would never willingly be out of his company; for which reason, when he went to church, he always shut him up in a room. However, he once happened to get out, followed the father to church, and got upon the sounding-board, where he lay very still till his master began to preach; then he got to the edge and imitated all the actions and postures of the preacher, which set the congregation a laughing. The preacher, not knowing the reason of this, reproved the audience for their mirth, which however they did not leave off; this put him in a passion, and consequently his motions were more violent; these, being imitated by the monkey, caused them to laugh louder than before; till at length one was kind enough to inform him of the occasion, and then he could not help laughing himself.

In 1752, a Pig-tailed Monkey was brought to England, from the island of Sumatra, and was of the size of a common house cat. The head was not so round as some of the monkey kind, and the face had little or no hair upon it. The colour of the face was swarthy, or sun-burnt, and the ears were shaped much like those of a man. The eyes were of a hazel colour, with black pupils; but

it had no white that appeared outwardly. The nose was pretty flat, and the mouth, when closed, shewed no external lips. The parts above and below the mouth were thinly beset with short black hairs, and the teeth were like those of a man. The head was covered with brown hair of a lightish colour, except over the eyes, and from the forehead along the crown, where it was much darker. The whole body was also covered with brown hair, darker on the back, and lighter on the sides, where it was exceeding thin. The hair was also thin towards the paws; and there was a dark list of hair from the forehead down the neck along the ridge of the back, and upper side of its tail to the end. The tail was little and short, contrary to what is common in the monkey kind, and he usually carried it almost upright. Under his tail were two callous round pieces of flesh on which he sat, when he slept. His paws resembled human hands, and had flat nails. They differed in the thumbs from the human hands, in being shorter, and less in proportion; but those on the hinder paws were larger.

AMONG the beasts of India, we ought not to omit the Shoegoose, a fierce little creature, about the size of a fox, with a face like a cat, and long ears, like those of a hare; its breast and belly are white, and its back and sides grey. These, as well as dogs, are used in hunting; on which occasion, a horseman carries the Shoegoose hoodwinked behind him; and, as the antelope and deer are pretty familiar, they will not start before the horses come very near. He who carries the Shoegoose, then takes off the hood, and shews him the game, which, with long swift leaps, he soon overtakes, when springing on its back, and getting forward to its shoulders, he tears out its eyes with

with his claws, and makes it fall an eaſy prey to the hunters.

THE Salamander, a ſpotted animal ſhaped like a lizard, and famous for its living in fire, is a native of India, though not peculiar to that country. We have an account in the Philoſophical Tranſactions, that a gentleman at Rome, named *Corvini*, having caſt into the fire a Salamander brought from the Eaſt-Indies, the animal preſently ſwelled, and then vomited a quantity of thick ſlimy matter, which put out the coals, retiring to thoſe that were extinguiſhed, and puting them out again in the ſame manner, as ſoon as they re-kindled; and thus ſaved itſelf from the force of the fire for the ſpace of two hours, after which it lived nine months. This gentleman kept the Salamander eleven months, without any other food than what it took by licking the earth on which it was brought from the Indies, which at firſt was covered with a thick moiſture, that was afterwards dried up, but moiſtened by the animal's urine. After it had thus lived eleven months, the owner had a mind to try how it would do on Italian earth, but the experiment was fatal to the Salamander, which lived but three days upon the European ſoil.

AMONGST the moſt beautiful and remarkable ſpecies of the feathered race that are to be found in the Eaſt-Indies, we may not improperly reckon the Peacock, which, though common in Europe for two centuries paſt, ſeems to be of Aſiatic origin. This bird is juſtly admired for the elegance of its plumage, which being ſo well known amongſt us, we think it would be needleſs to deſcribe particularly; but we may obſerve in general (with an ingenious author) that what the nightingale is to the ear, the Peacock is to the eye. We have indeed a variety of other birds that are

finely arrayed, and we are delighted with the conſideration of their ornaments, and the elegant taſte of their different veſtures; but, when the Peacock appears, every eye is attracted. The air of his head, the eaſy turn of his ſhape, the blended colours of the feathers of his body, the eyes and clouded ſpots of his tail, the gold and azure that ſhine in every part, the round of plumage he draws after him with ſo much pomp, and the very attention with which he unfolds his ornaments to the ſpectators, have a ſingular and raviſhing effect. The Peacock is ſo conſcious of the beauty of his feathers, that he makes the wheel, as we call it, to diſplay them in all their luſtre, and is then reckoned an emblem of pride: but, after all this external ſplendor, he has a diſagreeable voice, which makes his company much leſs deſirable than that of ſome birds whoſe muſic entertains us, though their cloathing is not ſo beautiful and dazzling.

THE Parrot is a bird found in great numbers in the woods of the Eaſt-Indies, and the warm parts of America. There are ſeveral ſorts of Parrots, differing both in ſize and colour. The common Parrot has a large head, with a hard hooked bill, the upper part whereof hangs over the lower; and of this he makes great uſe in climbing and deſcending, firſt catching hold of any thing with his bill, as it were with a hook, and ſo drawing up his body and faſtening his feet. The Parrot is the only bird, and indeed the only animal we know of, except the crocodile and gar-fiſh, that moves its upper jaw, which is immoveable in all other creatures. His tongue is broad, reſembling that of a man, whoſe voice and ſpeech he imitates better than any other bird, and has an excellent memory; inſomuch that we are told by perſons of credit,

credit, that the late Dr. *Charleton*, phyſician to king *Charles* the Second, had a Parrot that could recite great part of the maſs, which had been taught him by a Portugueſe prieſt, of whom he was purchaſed. The feet of the Parrot are of a ſingular faſhion, not having three claws ſtanding forwards and one backwards, but two each way, like thoſe of the woodpecker. Some Parrots live to a great age; but, as they are bred in warm countries, they are very tender in our cold winters. They are ſubtle and miſchievous, and ſeldom forget an injury.

As there are ſuch various ſpecies of the Parrot kind, that the curious have obſerved above a hundred ſorts of them, we ſhall only deſcribe two or three of the moſt remarkable.

THE read-breaſted Parrokeet, which is a very beautiful bird, has a bill of a yellowiſh white, with a very narrow ſkin over the upper part in which the noſtrils are placed. The upper part of the mandible is moderately hooked, and the edges on the ſides are waved. The feathers all round the bill are blue, and extend a little way over the crown. The ſides of the head, where the eyes are placed, and the hinder part of the head are green. Round the hinder part of the neck is a yellow ring, below which the neck is green all round. The back, rump, and upper ſides of the wings and tail, are all of a beautiful green. The breaſt is of a fine reddiſh orange colour, and the belly below it, with the under ſides of the wings, are of a dark green, with a little mixture of red. The thighs, lower belly, and covert feathers under the tail, are yellow interſperſed with green. The under ſide of the tail feathers is of a dirty yellow; and the ſmall feathers on the ridge near the joints on the inſide of the wings are yellow. The covert feathers that ſucceed them are red, and the inſides of all the quills have their tips and bottoms of a duſky

colour; the inner webs of the longer quills being yellow in the intermediate ſpace, and thoſe of the ſhorter quills next the body red. The legs, feet, and claws are of a duſky or blackiſh colour; their make and poſition are like thoſe of other birds of this kind.

The yellow Lawry or Parrokeet, brought from the Eaſt-Indies, is about the bigneſs of a lark, having a bill of a grey colour, and very hooked. Its legs and feet are of an aſh-colour, and its tail reaches eight or ten inches beyond the ends of the wings, the feathers being of a pale roſe-colour, terminating in a lovely blue, or a mixture of white and green. Its belly, head, neck, and back, are of a beautiful reddiſh colour; but the wings are chiefly green, intermixed with red feathers, one half whereof is variegated on each ſide with yellow, which expoſed to the ſun ſhew a thouſand varieties of ſhining colours, ſcarce to be expreſſed by a painter. Theſe birds rooſt and build on the higheſt trees, and fly in flocks, making a great noiſe, but learn to pronounce few words, if any at all.

THE Parrokeet deſcribed by Mr. *Waller* in the Philoſophical Tranſactions is a quite different ſpecies, having a ſhort neck, black eyes, a crooked bill, greyiſh legs and feet, and a tail no longer than the wings, the feathers of which near the quill are of a lemon-colour, next a ſcarlet for ſome ſpace, then a narrow ſtreak of green on ſome of them, after that a black, and green at the extremities. His breaſt and belly are of a fine light green, but his back and the feathers of his wings are ſomewhat darker. On his pinions are ſome ſhort blue feathers, and ſeveral on his rump. His bill is encompaſſed up to his eyes with a broad ſcarlet circle, reaching alſo down to his throat; which circle in the hen is of a paler colour, like that of

an

an orange, and is the only obſervable difference. —Mr. *Waller*, in diſſecting one of theſe Parrokeets, obſerved, that beſides the gizzard it had two craws, the uppermoſt being only a receptacle for the food, which is Canary ſeed, to be again returned to the mouth, where it is re-chewed, having before been only huſked, the animal ruminating like the cow and ſome other quadrupeds *. Their manner of chewing is thus: the under part of the bill being much ſhorter, ſhuts within the other, or againſt the roof of the mouth, which is furniſhed with ſeveral rows of very ſmall bars or ridges, like thoſe in the mouths of dogs and horſes. Theſe bars are not ſoft but horny, being part of

* To ruminate, or chew the cud, as it is popularly called, is an action thought peculiar to ſome four-footed animals, as oxen, ſheep, deer, &c. but, beſides what is here obſerved of the Parrot, we have a remarkable inſtance in the Philoſophical Tranſactions of a ruminating man who lived at Briſtol. He would begin to chew his meat over again within a quarter of an hour after his meals, if he drank upon them; if not, it was ſomewhat later. This chewing, after a full meal, laſted about an hour and a half; and, if he went to bed preſently after meals, he could not ſleep till the uſual time of rumination was over. The victuals, upon their return, taſted rather pleaſanter than at firſt. Bread, meat, cheeſe, and drink, returned much of the colour as if they were mixed together in a mortar. Broth and other ſpoon meats returned to his mouth all one as dry and ſolid food. The victuals ſeemed to the man to lie heavy in his throat till they had undergone the ſecond chewing, after which they would paſs clean away; and he always obſerved, that, if he eat variety of things, what he ſwallowed firſt came up again firſt to be chewed. If this faculty intermitted at any time, it portended ſickneſs, and he was never well till it returned. When this account was given by Dr. *Slare*, the man was twenty years of age, and had been ſo affected ever ſince he could remember. His father ſometimes ruminated, but nothing near ſo much as the ſon.

the upper bill; so that the bird, by carrying the edge of the under bill and end of the tongue against the ridges in the upper, breaks and reduces to a pap the seeds first moistened in the craw. The same gentleman took notice, that the wind-pipe of this bird differed from that of most other animals, having not only a larynx at the top thereof, as is usual, but another at its entrance into the breast, where it is divided into two branches. From this structure, which is said to be common to all Parrots, it may possibly be, that they can so readily imitate human voices; and, it being observed that Parrots are ventriloquous, it perhaps may be owing to the assistance of the lower larynx; for we may reasonably suppose that all ventriloquous cheats are framed by nature for such an imposture *.

THE Maccaw is a beautiful bird, and the largest of all the Parrot kind, being in length, from the tip of his bill to the end of the tail, about thirty inches, and its body is equal to that of a well-fed capon. The head, neck, breast, belly, and part of the wings and tail of the cock are of a fine

* We call those persons ventriloquous who speak inwardly, having a peculiar art of forming speech without opening the mouth, or at least without moving the lips; so that the voice, proceeding out of the thorax, to a by-stander seems to come from a distance. There was such a person some years ago in London, a smith by profession, who had the faculty in such perfection, that he could make his voice appear one minute as if it came out of the cellar, and the next as if in an upper room; and accordingly he has frequently called a person first up stairs, then down, then out of doors, then this way, then that, without stirring from his seat, or appearing to speak at all. Some attribute this to the operation or possession of an evil spirit, which is undoubtedly owing to art and mechanism.

scarlet;

The Crown Bird
Vol. IV. Pa. 59.

ſcarlet; the back, and the reſt of the wings and tail, of a rich blue; and the bill is ſo much hooked as to form an exact ſemicircle. His tail is about eighteen inches long, his legs ſhort and thick, and his talons large, black, and very crooked. The colours of the hen are ſomewhat different; but neither the hen nor cock has any merit but what conſiſts in the beauty of their feathers, for they do not entertain us with their talk like the ſmaller Parrots.

THE Crown-bird, brought from the Eaſt-Indies, is a very fine fowl, as big as a large turkey. On the top of his head grow ſeveral ſhafts or ſtalks, having little round balls on their ſummits, not unlike thoſe of an earl's coronet, of a yellowiſh colour. His bill is of a pale yellow, ſhort, and thick, ſtrong, a little bended; and juſt above it grows a ſmall red comb. On each ſide of his head he has a red ſpot, and his body is covered with long feathers reſembling hairs, of a dark-grey colour, having a purpliſh caſt on the back and ſides, ſome broad ſtripes of red on the wings, and the thighs yellow. He has a long neck and long legs, which are of a pale yellow colour, and his claws black.

THE Amadavat-bird, ſo called from its being found near that city in the Mogul's dominions, has a red bill, in ſhape like that of a gold-finch. His neck and back are of a duſky colour, but the feathers about the rump are of a ſcarlet or deep orange. The quill-feathers of the wings and thoſe of the tail are black, which laſt are about an inch and a half long, and juſt twelve in number. In ſome of theſe birds the upper part of the breaſt is ſcarlet, in others wholly black, as is the reſt of the breaſt and belly in all. The legs and

feet are white, and the claws very long, like thoſe of a lark, but more crooked.

THE Bengal Jay is a bird worth taking notice of, both for its colours and ſize, being ſomewhat larger than ours in England. The top of his head is blue, his neck and breaſt of an aſh-colour, with a mixture of light brown and red. His wings are blue, as alſo his thighs and belly. The back and rump are of a greeniſh colour; the tail is of a dark blue next the rump and towards the extremity, but of a pale or bright blue in the middle. The legs and feet are of a yellowiſh brown, and the claws black.

WE are informed by the jeſuit miſſionaries, that in the kingdom of Siam there is a ſort of birds call'd Criel Herons, which ſwarm upon the trees, and look like bloſſoms at a diſtance, it being a ſmall bird with tufts of white feathers upon the head, back, and belly, which render it extremely beautiful. There is likewiſe a remarkable inſect called a Fire-fly, having four wings of a bright flame-colour, two of which only are to be ſeen when they fly, and the other two when they reſt. The trees near the rivers are almoſt covered with them, and in the night they appear like ſo many lights upon the leaves.

IN Cochin-China there are certain ſmall birds, ſomewhat like ſwallows, whoſe neſts may be reckoned one of the greateſt curioſities of the Indies, being eatable, and much uſed in ſauces by the inhabitants of that country. Theſe birds build their neſts among the rocks on the ſea-coaſt: theſe are much in the form of our ſwallows neſts, and conſiſt of ſeveral coats or layers one upon another; but inſtead of clay or dirt they are compoſed of a ſort of gum or froth of the ſea, mixed with a juice or liquor proceeding from the ſtomach of the bird, which

which compoſition hardens in the ſun, and becomes almoſt tranſparent. Theſe neſts the natives gather in great quantities at the proper ſeaſon of the year, (probably when the birds have done with them and forſaken them) and frequently uſe them in the following manner: Having ſteeped them in warm water till they are ſoft, they tear them into ſmall pieces, and mixing them with little bits of ginſeng, (a root or plant to be deſcribed when we come to China) they put the mixture into the belly of a pullet, which they boil in a pot or pipkin cloſe covered, and leave it over the fire all night. In the morning they eat the pullet, the ginſeng and birds neſts making excellent ſauce, without any other ſeaſoning. Sometimes they uſe theſe neſts by way of medicine, to promote ſweat; but they generally mix them in their ſauces, to which they give an admirable reliſh. They are very nouriſhing, but to ſome people the taſte is not ſo agreeable; though *Borri*, a Jeſuit miſſionary, applauds them as a moſt delicious food; and *Tavernier*, who often eat of it, thought it a worthy preſent to perſons of the higheſt quality.

THE Bats on the coaſt of Malabar are of ſeveral ſorts; among which there is one ſo large, as *Nieuhoff* affirms, that their wings, when ſpread abroad, are as long as a man can reach with both his arms. They have red heads and necks, with black bodies, and are ſhaped like a fox. They are extremely nimble, and have very ſharp teeth, with naked wings like thoſe of the common Bat. Theſe are connected to their legs and tails, in ſuch a manner that they can neither walk nor ſtand. However, to ſupply this defect they have a kind of hook on each wing, of the thickneſs of a man's finger, wherewith they faſten themſelves to the branches of trees.

THERE

THERE are vaſt multitudes of theſe animals in the woods, ſo that it is no difficult matter to kill them; but this does not make them fall off the trees, for they will continue hanging there after they are dead. There is no poſſibility of taming them, for, if they are taken alive, they will bite their own wings, and fleſh as far as they can reach. Two of theſe may be ſet to fighting, and then they never leave off till one is dead. They will drink the palm wine out of the veſſels that are ſet to catch it till they are drunk. They delight in hollow trees, and commonly bring forth two young ones at a time. The Indians eat their fleſh, which is, however, diſliked by the Europeans.

THE Flying Cat of the Eaſt-Indies is alſo a kind of bat, and has wings that are covered on the inſide, as well as the out, with fine ſoft hair of a reddiſh grey colour. The head is more like that of a wild cat than a dog, though the muzzle reſembles that of the latter. The ears are of a middle ſize, the eyes are large and ſhining, and the downy wings are different from thoſe laſt deſcribed; for the fore feet, as far as the ſhort and crooked claws, together with the tail, are joined to the membraneous wings; inſomuch, that all parts aſſiſt their flying. The breaſts of the female are large and round, and the membraneous wings ſeem to be dentated on their edges; but the inner ſurface is leſs downy, and not of ſo deep a yellow as the outer. Theſe animals fly as low as the common bat and much like them. The wings are membranaceous, or cutaneous, covering the whole body, and are connected to the feet. At the joint of the wings, not far from the fore feet, it has hooks, by which it adheres to walls or trees. In ſome the mouth is more obtuſe or blunt, and comes near to the ſhape of that of a cat, and

in

in others it is long and narrow, and greatly reſembles that of a fox. It delights in dark places and caverns under ground, where it lies hid all the winter. The time of its flying is only in the evening while the twilight continues. It feeds upon flies of ſeveral kinds, and catches them while upon the wing. Some authors affirm, that the young ones adhere to the body of the dam, while they continue ſmall, and are carried about with her. They are never more than two, and ſhe has only two teats to give them ſuck.

THERE are various kinds of ſerpents in the Eaſt-Indies, one of the moſt remarkable of which is that called by the Portugueſe Cobra de Capello which is very large, with a monſtrous broad neck, and a mark of a dark brown on the forehead, which viewed before looks like a pair of ſpectacles; but behind like the head of a houſe cat. The eyes are lively and full of fire; but the head is ſmall, and the noſe flat, though covered with very large ſcales of a yellow aſh-colour. The ſkin is white and the large tumor on the neck is flat, and defended with oblong ſmooth ſcales. The ſcales on the lower part of the neck are ſmall, and grow larger on the trunk of the body. The teeth are ſmall, and almoſt hid in their ſockets.

THE Serpent of Malabar has a robe, which conſiſts of a tiſſue of white, round, circular ſcales, from the head to the end of the tail; and there are ſtreaks as black as jet, which are broad on the top of the body, but become narrower as they approach the belly, and ſometimes diſappear before they reach it. The whitiſh ſcales that run croſs-ways under the belly, are divided in the middle by a blackiſh line. The head is furniſhed with great and ſmall ſcales, agreeably painted with a mixture of white and black. *Seba* informs

us,

us, that the ladies in the Eaſt-Indies are very fond of this ſerpent, and take delight in playing with it.

THERE is another ſerpent of Malabar, which is very ſingular and very dangerous. It is no thicker than a man's finger, and yet is five or ſix feet long, and of a green colour, inſomuch that it cannot be diſtinguiſhed from the graſs. It will fly upon paſſengers, and fix upon their eyes, noſe, or ears; but the bite is not venomous; however, under the neck there is a poiſonous bladder, which proves fatal, when it touches the ſkin.

DELLON affirms, that in the Eaſt-Indies are Serpents of twenty feet in length, and ſo thick, that they are able to ſwallow a man. They generall haunt deſert places, for, though they are ſometimes ſeen near great towns on the ſea-ſhore, or on the banks of rivers, yet it is generally after ſome great inundation. He never ſaw any but what were dead, and they appeared to him like the trunk of a large tree lying on the ground. The Americans pretend that one of theſe Serpents will ſwallow a deer horns and all; and the Indians, that it will ſwallow a buffaloe whole; both which ſtories are very improbable.

THE Crocodile is alſo common enough in Siam and others parts of the Indies, but we defer the deſcription of it till we ſpeak of thoſe of the river Nile in Egypt; and ſeveral other animals will be taken notice of in treating of the Indian iſlands, which are either peculiar to them, or more frequently found there than upon the continent.

BUILDINGS.

THROUGHOUT India, and the Mogul's dominions, the houſes in general, even thoſe of the chief towns, are either built of wood or clay, and thatched or covered with branches of palm-trees, or the like; but the houſes of the richer ſort of people, who live in trading towns and cities, are built of brick or ſtone, and covered with tiles, but not ſo well burnt and durable as ours in Europe. However, though the generality of the Indian ſtructures make a mean appearance, the palaces of their princes and great men, and the Mahometan moſques, are many of them ſtately and beautiful fabrics. It is true, their architecture ſeems odd to Europeans, being not like that of the ancients, whom we copy after, but in a taſte peculiar to the Eaſtern nations, which is not without it's beauties and conveniencies.

ACCORDING to Mr. *Groſe*, the buildings of the Moguls, are all in the Perſian ſtile, and like them, they are fond of fine gardens, and eſpecially of water, both dormant and in action, from natural or artificial caſcades, the climate ſupplying them with plenty of ever-greens. In the midſt of the gardens, they have commonly neat, airy pavilions, contrived with ſpecial regard to coolneſs, where the owners indulge themſelves in parties of pleaſure with their women, in the heat of the day; and in the cool of the evening on the ſides of their ponds, finely ornamented with ſteps down to the water-ſide, and in the middle, on every ſide of the oblong ſquare, which is generally the figure of them, with places for recumbence, ſpread with Perſian or Turky carpets. Their gardens are commonly pretty much like the Chineſe, in a wilderneſs ſtile, with

with this particularity, that the door is generally at a corner of the wall, inſtead of being in the middle, as is the European manner. By this means the avenue to the pavilion does not front it, ſo as to preſent to its view the length of a gravel, or tediouſly uniform green walk; inſtead of which they prefer, for the pleaſure of the eye, beds of flowers, as variegated as poſſible, and in all the confuſion of wild nature, which are immediately ſubjacent to every ſide of the pavilion, to whoſe corners only the walks obliquely lead, ſo as not to interſect thoſe flower ſpots. As to ſtatues, knots, quaint devices, or compartments, they have happily no idea of, or taſte for them.

THE palace of the great Mogul at Agra, the capital of his empire, as taken notice of by *Tavernier*, *Bernier*, *Thevenot*, and other travellers, is a very ſumptuous and magnificent ſtructure. This palace, according to *Manouchi*, an Italian, who lived forty years at Agra, and was the Mogul's phyſician, is a citadel in form of a creſcent, the walls whereof are mounted with cannon. It is ſituated on the river Semana or Gemma, and is built of a ſpotted ſtone like marble, which, when the ſun ſhines upon it, looks very beautiful at a diſtance. It is encompaſſed with ditches and a terraſs-garden cut through with canals of running water, intermixed with green-plots and pleaſure-houſes, which form a delightful ſcene. *Thevenot* ſays the palace conſiſts of three courts, with porticoes and galleries running round them, which are finely gilt and painted, and ſome parts of them covered with plates of gold. Under the galleries of the firſt court there are lodgings for the Mogul's guards, in the ſecond for the chief officers, and the third conſiſts of ſtately apartments for the emperor and his ladies, who, accord-

ing

ing to the cuſtom of the eaſtern princes, are very numerous. Within the walls there are likewiſe apartments for the inferior officers of the court, and long galleries for the emperor's manufactories of ſtuffs of gold, ſilver, ſilk, tapeſtry, &c. and for his gold-ſmiths, enamellers, and other artificers. Between the palace and the river is a large area where the troops exerciſe, and the emperor ſometimes pleaſes himſelf with ſeeing elephants fight, or ſuch other diverſions as he orders to be exhibited there or upon the water. Here are alſo about thirty palaces of princes and great men belonging to the court, all built of brick or ſtone, and in the ſame line with the Mogul's palace, beſides many leſſer palaces and other fine buildings, which all together afford a charming proſpect on the other ſide of the river. In a word, we may form ſome judgment of the ſpaciouſneſs and magnificence of this imperial palace from the account of father *Toſi*, who ſays it is four miles in compaſs, and deſerves to be ranked amongſt the wonders of the world.

NOR is the Mogul's palace the only ornament of Agra, for *Thevenot* informs us, that there is a vaſt number of moſques in that city, above eight hundred baths, and about threeſcore ſtately caravanſeras, ſome of which conſiſt of ſix large courts with piazzas round them, and very commodious apartments for the merchants. The ſtately monuments, which ſeveral great men have erected for themſelves in their life-time, or to the memory of their anceſtors, contribute likewiſe to the beauty of Agra, particularly that which the emperor *Jehan Guir* cauſed to be built for his father *Ecbar*, which ſurpaſſes all thoſe of the Moguls in magnificence. But that which the ſame emperor erected for one of his favourite wives is ſtill more ſurpriſing, inſomuch that *Bernier* thinks it deſerves better

better to be reckoned among the wonders of the world, than the Egyptian pyramids, or any of the others that are ſo denominated. This mauſoleum was contrived and carried on by the beſt architects from all parts of the Indies, and was twenty years in completing, though a vaſt number of hands were continually employed. It ſtands at a place called Secandra, which is reckoned one of the ſuburbs of Agra; and ſeems, by the deſcription that travellers give of it, to be a prodigious pile of buildings in the midſt of a large and beautiful garden, into which (ſays *Thevenot*) all the parts of the mauſoleum are diſtributed. They particularly admire the great pavilions, the beautiful porticos, the lofty dome that covers the tomb, the juſt diſpoſition of its pillars, the arches that ſupport a great many galleries one above another, the fine piazzas, alcoves, and terraſſes; all which ſhew that the Indians are not unſkilled in architecture, and that, though their orders (as we have already obſerved) are different from thoſe of the ancient Greeks and Romans, they are not without a pleaſing ſymmetry and magnificence.

HERE it may be expected we ſhould take ſome notice of the Mogul's palace at Dehli or Delli, which is ſometimes reckoned the capital of his empire, the court frequently reſiding in that city, where the air is cooler and more wholſome than at Agra. This palace is likewiſe built in the manner of a citadel, being about two miles in circumference, ſurrounded by good walls, with round towers at proper diſtances, built partly of brick and partly of ſtone. On all ſides, except towards the river, (which is the ſame that Agra ſtands on) it has a ditch faced with free-ſtone, and alſo very lovely gardens. Towards the river, as at Agra, there is a ſquare for military exerciſes, the fighting

ing of wild beaſts, and ſuch-like diverſions. Here are ſeveral apartments for artificers in the emperor's pay, for the guards and officers on duty, and for the great men who have the care of his houſhold. *Thevenot* makes particular mention of a ſtately hall, adorned with thirty-two marble pillars, where the emperor, having all his officers ſtanding before him, with their hands acroſs their breaſts, gives audience every day at noon to all who apply to him for juſtice. The ſame traveller mentions, but does not deſcribe, the celebrated throne of the great Mogul, which is ſaid to be of maſſy gold, the four feet whereof are adorned with large diamonds, rubies, and other precious ſtones. The canopy over it is alſo covered with diamonds, and has round it a fringe of pearls, and above the canopy is a peacock, whoſe tail is full of blue ſapphires, and other gems of different colours. The body is of enamelled gold, ſet with jewels; and on the breaſt there is a large ruby, from whence hangs a pearl like a pear, weighing about fifty carrats. The twelve pillars that ſupport the canopy are ſurrounded with many rows of fine pearls, and on each ſide of the throne are umbrellas of crimſon velvet, embroidered with gold, and fringed round with pearls, the ſticks whereof are likewiſe covered with jewels. To the throne are hung a ſcymetar, a battle-ax, a ſhield, a bow, and a quiver full of arrows, all enriched with precious ſtones, inſomuch that ſome have valued this throne and all its appendages at twenty millions ſterling; but we are apt to think there is no great dependance to be had on calculations of this nature. That the riches and ſplendor of this eaſtern monarch's court are very great is not to be queſtioned; and M. *Bernier* thinks it well worth a foreigner's curioſity to be in the grand ſquare before

fore the palace when the great officers come thither to hold courts or do other duty, to see them riding in from all quarters, finely dressed and mounted, either on stately elephants or on horseback, with their footmen before and behind them, and many of them carried on the shoulders of six men, sitting in rich palanquins, with embroidered cushions at their backs, and chewing betel to sweeten their breath, while a servant carries their spitting-box of china or silver, and others fan them, and drive away the flies with the trains of peacocks.—We might add much more of the magnificence and splendor of the great Mogul when he gives audience to ambassadors, when he goes a hunting, and on several other occasions; but this would be wandering from our subject. It is likewise to be considered, that the vast treasures of this emperor, and probably the splendor of his court, are very much diminished, since the late expedition of the famous *Kouli Kan* into his dominions, who made himself master of Delli, and of the emperor's person, and brought from thence into Persia an immense booty.

THE Mahometans of the Indies are at great expence in their mosques, which are commonly of free-stone, and sometimes of marble; but the walls are perfectly plain, and the inside has no painting or images. They are built much in the same form as those we have heretofore described in the Turkish dominions, being covered with a dome, and have small high towers or minarets, which the priests ascend at certain hours to call people to prayers. There is scarce a Mahometan of any condition but erects his mausoleum in his lifetime; for which end they wall in a large piece of ground, with a reservoir of water, planting it with trees and flowers like a garden, and here they

erect

erect a little mosque or temple, raising their monument near it, which is generally arched and covered with a handsome cupola. In some of them lamps are kept continually burning, and priests read their law, for which certain revenues are appointed.

The buildings of the Mahometans at Surat are partly in the Gentoo, and partly in the Moresk taste. The private apartments lie backwards, for the greater security of the women, of whom they are remarkably jealous. They are very fond of having one room, at least, where a fountain in the midst of it, is kept continually playing, by the noise of which they are lulled to sleep, and refreshed by the coolness it diffuses through the apartment. Besides the convenience of eastern sophas, which are so commodious for their manner of sitting cross-legged, they are all fond of European looking-glasses, with which they chiefly hang their rooms. They have also another ornament, and that is the beams of the chamber cielings are curiously inlaid with ivory and mother of pearl, in flourishes and scroll work. They have generally a kind of saloon, which they call a divan, intirely open on one side to the garden, where they have fountains playing, which, joined to the variegated flower-beds in the front of it, add to the pleasantness and airiness of the prospect. In summer, when the heats are most intense, they have country receſſes, at a small distance from the town where they reside, or go in parties, to enjoy themselves in their gardens and frescades, by the side of the waters with which they are furnished.

The houses of the black merchants, as they are called, though some of them are far from deserving the appellation of black, are, for the most part,

part, extremely ill built and incommodious; the windows ſmall, and the apartments ill diſtributed; ſome, however, make a better appearance, but they have all a certain meanneſs in the manner, and clumſineſs in the execution, when compared with the moſt ordinary European ſtructures. There is yet a convenience moſt of the houſes belonging both to the Engliſh and natives enjoy, which are ſmall ranges of pillars that ſupport a penthouſe or ſhed, forming what is called verandas, either round or on a particular ſide of the houſe, which afford a pleaſing ſhelter againſt the ſun, and keep the inner apartments cool and refreſhed by the draught of air under them.

As for the pagodas of the Gentoos, there are few in India Proper worth mentioning, they being commonly low mean buildings, admitting the light only at the door, facing which is placed the principal idol, made after the various imaginations they have formed of the ſubaltern deities, the objects of their worſhip. They fancy, it ſeems, that a dark gloomy place inſpires a kind of religious horror and reverence. They are extremely fond of having their pagodas among trees, and near the ſide of a tank. Theſe tanks, or ponds, are frequently very expenſive works, they being generally ſquare, and ſurrounded with ſtone ſteps, that are very commodious to the bathers.

THE pagodas in ſome other parts of the Indies are, however, magnificent ſtructures, being built of ſtone, with lofty ſpires, furniſhed with bells. The figures of the idols are extremely various, ſeem hieroglyphical repreſentations of the attributes of the deities they worſhip. The pagodas of the Siameſe, are by far the moſt ſtately, particularly thoſe of the city of Siam, where their magnificence exceeds every thing of the kind to be

be seen in the Indies. The most celebrated of these is that of the king's palace. While a stranger is startled at seeing, on one side of the portal, an horrible monster, and on the other a cow, his eyes and imagination, all at once, lose sight of the objects, and are dazzled with the splendor of these walls, the cieling, the pillars, and an infinite number of figures, so well gilt, that they seem covered with plates of gold. Having advanced some steps, a small elevation appears in the form of an alter, on which are four figures, falsely said to be of massy gold, nearly as big as the life, sitting cross-legged; beyond it is a kind of choir, where is the richest idol in the kingdom. This statue is about forty five-feet in height, and, being in a standing posture, touches, with its head, the vault of the choir, and is finely gilt. On its sides are others of a smaller size, which are also gilt, and inriched with jewels.

AT the distance of a hundred paces from the palace, is another temple, which, though not so rich, is a regular and beautiful structure, adorned with one large cupola, encompassed by four others of a smaller size, and the roof is covered with gilt pewter.

EVERY Siamese temple is seated in the midst of a square piece of ground, encompassed with pyramids, and inclosed by a wall; on the outside of which is another square, that encompasses the former; and round it are the cells of the Talapoins or priests, and the Talapoinesses, both of which are frequently very numerous. These cells are single houses, erected upon bamboo pillars, at a small distance from each other; and the whole inclosed with a fence of bamboo pales. The steeple of the pagoda is a wooden tower, that stands by itself near the temple, and has a bell without a

clapper, which, inſtead of ringing, they beat upon, with wooden hammers.

THE Talapoins educate all the youth, and are obliged to lead auſtere lives; by which they are ſuppoſed to atone for the ſins of the people. They live on alms, but muſt not eat in common; for every one ſubſiſts upon what he himſelf procures by begging, yet they are extremely hoſpitable to ſtrangers, and even to ſuch Chriſtians as come to their cells; and, on each ſide of their gate, are lodgings for the accommodations of travellers. Of the Talapoins are two ſorts, one of the cities, and the other of the woods; but the latter lead much the ſevereſt lives, and both of them are obliged to celibacy, on pain of being burnt.

AMONG theſe pagan temples we are told of one at Golconda, which has a nich conſiſting of a ſingle ſtone, of ſuch a prodigious bulk, that they were five years in bringing it to the place, ſix hundred men being conſtantly employed about it all that time, and the machine that brought it drawn by fourteen hundred oxen. But of all the Indian pagods thoſe of Elora near Doltabad in the kingdom of Decan are the moſt celebrated, according to the account of M. *Thevenot*, who made a journey thither on purpoſe to ſee them, induced by the reports he had heard of them at Surat. Having aſcended a rugged mountain, by a road cut out of the rock, with a wall on the ſide of it to hinder the fall of carriages, our traveller tells us he diſcovered a ſpacious plain, deverſified with towns, villages, gardens, woods, and arable land, many lofty tombs covered with cupolas, and the moſt remarkable pagods in the Indies. The firſt thing he took particular notice of was ſeveral high chapels, where he entered a porch cut out of the rock, on each ſide whereof was a gigantic figure of a man cut

out

out of the rock likewiſe, and the walls were covered with various figures in Relievo. Beyond this porch he found a ſquare court, every way a hundred paces; the walls whereof, which were the natural rock, were about thirty-ſix feet high, and as ſmooth and even as if plaiſtered with a trowel. Theſe walls are hollowed underneath, the void ſpace making a gallery, ſupported by a row of pillars cut in the rock, which ſeems ſo undermined, and ſo ſlenderly propped, that one can hardly forbear ſhivering at firſt entering into it. In the middle of this court there is a chapel, whoſe walls both within and without are adorned with baſs-reliefs, repreſenting griffons and ſeveral ſorts of animals. On each ſide of the chapel is a pyramid or obeliſk, larger at the baſis than thoſe of Rome, but not terminating in a point, and having ſome characters upon them which *Thevenot* did not underſtand. Near the obeliſk, on the left hand, is the figure of an elephant as large as the life, cut out of the rock, like the reſt of the fabric, but his trunk is broken. At the farther end of the court are two ſtair-caſes hewn in the rock, aſcending which we have the proſpect of a plain extending a league and a half or two leagues in length, full of ſtately monuments, chapels, and pagods, all owing their origin to the rock, which abounds in this part of the country.

AMONGST the reſt of the heathen temples there is a very large one built in the rock, having a flat roof, ſuſtained by eight rows of pillars, about a fathom diſtant from each other. This temple is divided into three parts, the body of it taking up more than two thirds of the whole; the choir, which is narrower, makes the ſecond part; and the third, which is the end of the temple, has the appearance of a little chapel. In the middle of

this chapel (if we may call it so) stands a gigantic idol, with a head as big as a drum, and it's other parts proportionable. The walls are all covered with monstrous figures in relievo, and on the outside of the temple are several little chapels adorned with sculptures representing men and women embracing one another.

OUR author went into several other temples of different structure, but all formed in the rock, and adorned with figures, pillars, and pilasters. One of them is divided into three stories, supported by so many rows of pillars, each of them having a great door in the front, with stairs hewn out of the solid rock. There are also several arched temples, in one of which is a square well, full of excellent water. In short, all along this rock, for more than two leagues, there are vast numbers of pagods, each dedicated to some heathen saint, whose statue is placed upon a pedestal at the farther end of the pagod.

IN these pagods M. *Thevenot* saw several Santos with long hair, who were all naked except their privities, and besprinkled with ashes. However, he could get no particular information about these structures, but what he learnt from the heathens of Aurengabad, who have a tradition that they were all built by giants. Indeed it is no wonder they give such a fabulous account of these pagods, for such a number of spacious temples, full of pillars and pilasters, and so many thousands of figures, all cut out of a natural rock, seemed to our author to be works surpassing human power; and it appears (says he) that in the age wherein they were made the people were not altogether barbarous, though the architecture and sculpture are not so delicate as ours. M. *Thevenot* spent only two hours in viewing what has been

been here described, but says it would have required several days to examine all the curiosities of this remarkable place.

We ought not to omit a very remarkable ancient temple hewn in a rock in the island of Elephanta, near Bombay. This is a small island, which consists of almost one intire hill, at the foot of which is an elephant of the natural size, cut in stone. On ascending an easy slope, near half-way up the hill, you come to the entrance of this surprising temple, which is an oblong square, eighty or ninety feet long, and forty broad. The roof, which is formed of the rock, cut flat, is about ten feet high, and supported towards the middle, at an equal distance from the sides, and from one another, by two regular rows of pillars, that are very massy and thick, in proportion to their height; and have capitals, which bear some resemblance to a round cushion, pressed by the weight of the super-incumbent mountain, with which they are also of one piece. At the farther end are three gigantic figures, the face of one of which is at least five feet in length, and of a proportionable breadth: But these monuments of antiquity were much disfigured by the blind fury of the Portuguese, when they made themselves masters of the place. About two thirds of the way up this temple, are two doors, fronting each other, leading into smaller rooms that open upon the hill. By the door-way on the right hand, are also several mutilated statues, single, and in groups; particularly one that has some resemblance to the story of Solomon's dividing the child, a figure standing with a drawn sword in one hand, and holding an infant in the other, with the head downwards. The door-way, on the left-hand, opens into an area of about twenty feet in length,

and twelve in breadth; at the upper end of which, on the right-hand, is a colonade, covered at the top. It is ten or twelve feet deep, and in length anſwers to the breadth of the area: This joins to an apartment adorned with regular architecture; it is an oblong ſquare, and has a door in perfect ſymmetry. The whole is executed in a taſte very different from any of the oldeſt and beſt Gentoo buildings any where extant. It is remarkable that round the cornices are ſome paintings, the colours of which remain exceeding freſh and bright, though ſuppoſing they are as old as the temple, they muſt have been there ſome thouſand years. Indeed the time, when this great work was performed, is intirely unknown; but it is probable, that it was formed by the aborigines of the country, and that the religion of the Gentoos has undergone ſome revolution; which is the more probable, as the preſent Gentoos ſeem to retain no veneration for the place, except on account of it's undoubted antiquity.

ARTS, MANUFACTURES, &c.

THE fine ſilks, calicoes, muſlins, and other manufactures of various kinds, imported from the Eaſt-Indies, are a ſufficient proof that the natives are a very ingenious people. It is ſaid they will imitate a pattern, or copy a picture, at firſt ſight, ſo that it will be hard to diſtinguiſh the copy from the original. On the Coromandel coaſt they paint their chints and calicoes with a pencil, but thoſe of the more northern parts of India are printed; the colours however are very laſting, and not to be fetched out by waſhing. For inlaying in ivory no people exceed them; nor can they be equalled for cabinets, ſcrutores, and

and other curious wood-works very finely lacquered. They are also remarkable for making canes with beautiful cases of tortoise-shell, and abundance of other pretty toys.

THE fineness of the Indian muslins is particularly remarkable, and, if a piece be torn, the natives have a method of joining it so nicely, that the place where it was rent cannot be discerned. The Cambodians are very expert in making white or painted dimities, and they have excellent carpets, besides a sort for the common people, which they call Bancales, not unlike the plaids worn by the Highlanders of Scotland. They likewise weave and work with the needle rich hangings, coverings for the low chairs used by women of quality, and for their palanquins or litters, some of which are adorned with ivory and tortoise-shell, as are also their chess-boards, and other playing-tables. They make beads, little idols, bracelets, necklaces, and other toys, of a very transparent crystal which is found in their mountains; and their manufacture of indigo is not inconsiderable.

AMONG their meaner trades, their barbers perform their work with great ease and dexterity. They have all one uniform set of materials, a round glass with a handle, which they stick in their girdles like a dagger, and put in your hands while you are shaving; a small copper tumbler, no bigger than a tea-cup; and some instruments for picking the ears, and pairing the nails, either put in a case, or hung on a wire. The Eastern nations, ingeneral, must be allowed to be extremely studious in the cleanliness of their persons, which they imagine conduces to the pleasure of the mind.

THE Indian goldsmiths, though their tools are mean, will imitate a piece of European work

exactly enough, but their common ſmiths are but indifferent workmen. They neither make clocks, watches, nor gun-locks, nor any iron or ſteel work that requires ſprings; but they make ſwords, poiniards, ſcymetars, and other weapons. The want of clocks they ſupply in great towns by a veſſel of water, which runs out by a ſmall hole in the bottom into another veſſel; and, when it is out, a watchman appointed for that purpoſe gives notice of the time of day by ſtriking upon a bell or concave piece of metal. The inhabitants of Cambaya are famous for their manufacture of cups, ſpoons, haſps for knives, &c. which they make of agate that is found in ſome of their rivers. They alſo make fine quilts, and are the beſt embroiderers in the world.

IN ſome parts of the Indies they have very good ſhip-carpenters, who build after the Engliſh model. They chiefly uſe a firm laſting timber called Teak, and, the planks being rabbeted and let into one another, the ſeams are made very tight with oakam and a kind of pitch called Dammer, brought from the Maldive iſlands. The cocoa-tree furniſhes them with cables and cordage*, their ſails are generally of cotton, and their anchors and guns they have from Europe. They have a kind of flat-bottomed veſſels called Muſſoulahs, whoſe ſides are five or ſix feet high, and the planks very thin, being ſewed together with ropes, ſo that they will yield like paſteboard, and are in no danger of ſplitting when they ſtrike upon the ſhore. Theſe boats are rowed by ſix or eight men, and carry large quantities of

* The ropes are made of a certain woolly ſubſtance growing on the inward ſurface of the cocoa-nut.

goods.

goods. They have alſo a veſſel called a Catamaran, in which they carry anchors, guns, and other heavy articles. Theſe conſiſt of only three or four pieces of timber tied together, and are moſtly uſed by fiſhermen, being not fit to carry goods that are damageable by wet, every little ſea beating over them; and for the ſame reaſon paſſengers ſeldom go in them, though they are as ſafe as any other veſſel; and ſome people have ſailed in one of them along the coaſt for a hundred miles together.

THEIR navigators have but little ſkill, but are able to conduct ſhips in the fair ſeaſon, when they ſeldom meet with ſtorms. Their common ſailors are rather better in their claſs, though they want the vigour, expertneſs, and patience of fatigue, for which the Europeans are diſtinguiſhed.

Mr. GROSE obſerves, that, though the Banians, who are profeſſed merchants, have been repreſented by ſome authors, as a tricking, artful ſet of people, difficult to deal with, this is ſo far from being true, that they are, in general, the faireſt and openeſt dealers in the world; and that thoſe of Surat, eſpecially, are famous for the ſimplicity and frankneſs of their tranſactions. As an inſtance of this, on a ſhip's arrival, laden with goods, nothing more is neceſſary, than for the commander, or ſupercargo, to bring his muſters or ſamples on ſhore, together with his invoice; and theſe merchants, reſorting to him, will, if the aſſortment ſuits them, immediately ſtrike a bargain for the whole cargo, with no other trouble than ſettling the per centage, upon the items of the invoice. In this manner, ſays our author, many a cargo, from five to thirty thouſand pounds and upwards, have been ſold in half an hour's time, with very few words; and the amount immedi-

ately paid, either in ready money, or by barter, according as the buyer and seller have agreed, with at least as much probity as is ever practised by Europeans of the most established character. Indeed, these Banians have an advantage over our merchants, but it is such a one as we cannot reasonably complain of; this is the surprizing coolness and serenity with which they conduct all their affairs. If you offer them a great deal less than their goods are worth, or fly into a passion at their undervaluing yours, they will not shew the least indecent heat of temper, but suffer you to evaporate your resenntment, without interruption, and patiently wait till your fit of drunkenness is over; for they consider it in no other light, and then calmly return to the same point. In this instance, they have the same advantage over the Europeans, as a cool gamester has over one in a passion.

WHAT travellers relate of the dexterity of the Indians in taking water-fowl seems worth the reader's observation. The fowlers wade with only the head above water, which they cover with a pot full of holes, to let in air and give them sight. This pot is stuck all over with feathers, to deceive the wild ducks and other game, so that, when the swimmer draws near them, they are not in the least frightened. The fowler then lays hold of them by the feet, drawing them down under water; and the rest of the ducks thinking their companions have only divided, are not at all disturbed, but keep swimming about the place, till at length they are most of them taken in the same manner.

THE same French traveller gives an account of some extrardinary feats of agility performed by the Indians, who far exceed the tumblers and

posture-

posture-masters of Europe. The truth of the facts is not to be questioned, as our author was an eye-witness of what he relates, though some things that he tells by hearsay are to be suspected; for, as he was a man of great veracity, so he seems to have had too much credulity. In the province of Doltobad, near a village called Patoda, there was a great concourse of people to see these performances, and M. *Thevenot* was placed on an eminence under a tree, from whence he could easily see all that was acted. The finest tricks he thinks were shewn by a girl of thirteen or fourteen years of age, who diverted the company for the space of two hours and upwards; and amongst her other performances this appeared to our author to be extremely difficult: She sat down upon the ground, holding in her mouth a long cutting sword, and with her right hand she took hold of her left foot, brought it up to her breast, then to her left side, and, without letting go her hold, she put her head underneath her right arm, and at the same time brought her foot down along the small of her back, then quite under her, and this four or five times without resting, being always in danger of cutting her arm or leg with the edge of the sword. Then with her left hand and right foot she performed the same.

THE girl having rested a little, a hole two feet deep was dug in the ground, and filled with water, into which they threw a little hook or clasp, which she was to fetch out without touching it with her hands. To this end she placed her feet on the sides of the hole, turning herself backwards till she rested upon her hands in the same place where her feet had stood. Then bending her arms she let down her head into the water to search for the hook, which she missed the first time; but making

a second attempt, and resting only on her left hand, she raised herself up again with the hook at her nose.

AFTER this a man set the girl upon his head, and ran full speed with her a considerable way, the girl not tottering in the least. Then setting her down, he took a large round earthen pot or pitcher, and put it upon his head with the mouth upwards; and, the girl having got on the top of the pitcher, he carried her about as before. This he did twice more, having once put the pitcher with the mouth downwards, and the other time with the mouth side-ways. The man then took a bason, and placed it bottom upwards upon his head, with the pitcher upon it, and the girl upon that, carrying her about with the same ease and security. In the next place he fixed in the bason a wooden truncheon, about a foot high and as thick as one's arm, upon which he caused the girl to stand upright, and ran about with her as he had done before. Sometimes she stood upon one foot, holding the other in her hand, and sometimes sat down upon the top of the truncheon. Then the man put into the bason four wooden pins, about four inches high, placed in a square form, with a board upon each of them the breadth of two fingers, and upon these four other pins, with boards upon them, making as it were two stages or stories above the bason. Then the girl standing on the top of these little boards, the man carried her about with the same swiftness; and, though the wind was high, she did not appear in the least afraid of falling.—These people shewed a hundred other surprising tricks*, which our author forbore to

* Notwithstanding the wonderful feats of these Indians, which made M. *Thevenot* say they do all and much more

to describe for fear of being tedious; and for the same reason we think it proper to conclude this subject.

Customs of the INDIAN GENTOOS *and* MOGULS.

THE distinction of the Gentoos into Casts or Tribes is a remarkable peculiarity, in their government and religion. Their warriors, priests, merchants, husbandmen, and all their various artificers and mechanics, are each classed in their respective tribes; and, though all profess the same religion, they must neither eat, drink nor intermarry

---

than the Europeans do, we are apt to think, that if he had seen the performances of some of our modern posture-masters, balance-masters, &c. he would have been of another opinion. He says the Indian tumblers are as supple as an eel, that they will turn their body as round as a bowl, and then others will roll them about; but perhaps there never was a more remarkable instance of this suppleness, as he calls it, than in the famous posture-master Clarke, of Pall-mall in London. This man (we are told in the Philosophical Transactions) had such an absolute command of his muscles, &c. that he could disjoint almost his whole body; so that he imposed on that great surgeon Mullens, who looked upon him to be in so miserable a condition, that he would not undertake his cure. Though a well-made man, he would appear in all the deformities imaginable, hunch-backed, pot-bellied, sharp-breasted, &c. He disjointed his arms, shoulders, legs, and thighs, and rendered himself such a seeming object of pity, that he has frequently prevailed with the company he had been in the minute before to give him money as a cripple, being so much unlike himself that they did not know him. He would make his hips stand a considerable way out from his loins, and so high as to invade the place of his back; in which posture he had a very large belly. His face was as changeable as any part about him, so that he could vary his countenance in a very surprising manner.

with

with each other, ſo that the child of a goldſmith cannot be married to the child of a carpenter; all muſt be born in the profeſſion they exerciſe, and no tranſition, or mixture, is allowed.

As the Indian Gentoos believe the doctrine of the Metempſychoſis, and the ſtricter tribes kill no animal whatſoever, leſt they ſhould oblige the ſoul of a parent or friend to quit it's habitation, it might be expected that nothing but mildneſs, gentleneſs, and humanity, would prevail amongſt them; but, that ſo rich and delightful a country might not want defenders, the province of war was left to other caſts, from which their kings, chiefs, and generals are taken, who are born to the profeſſion of arms. Thus a religion, full of humanity and mildneſs, produces the moſt tyrannical forms of government.

AMONG the Naires, a tribe born to the profeſſion of arms, the ſtrange cuſtom prevails of one woman having ſeveral huſbands; and yet this is never known to produce any jealouſies or quarrels among thoſe who poſſeſs the ſame woman. The number of theſe huſbands is not ſo much limited by any law, as by a kind of tacit convention, and ſeldom exceeds ſix or ſeven. A woman is, however, under no obligation to admit more than a ſingle attachment, though ſhe is not the leſs reſpected for uſing her privilege in it's utmoſt extent, and they are ſometimes ſaid to have twelve huſbands; but they, as well as ſhe, muſt be all of the ſame tribe*.

The

* The baron de Monteſquieu, treating of this cuſtom in his Spirit of Laws, thus accounts for it's origin: "The Naires "are the tribe of nobles, who are the ſoldiers of all thoſe na- "tions. In Europe ſoldiers are forbid to marry; in Malabar, "where the climate requires greater indulgences, they are "ſatisfied

The huſbands cohabit with her by turns, according to their priority of marriage, each eight or ten days, as they agree; and he who lives with her during that time, provides for her ſupport. When the man who cohabits with her, goes into her houſe, he leaves his arms at the door, and none dare remove them, or enter the houſe on pain of death; but, if there are no arms to guard the door, any of them may freely viſit her. During the time of cohabitation, ſhe ſerves her huſband as purveyor and cook; ſhe alſo keeps his cloaths and arms clean. When ſhe proves with child, ſhe nominates it's father, who takes care of it's education, after ſhe has ſuckled it, and taught it to walk and ſpeak; but, from the impoſſibility of aſſigning the true heir, the eſtates of the huſbands, deſcend to their ſiſters children, and if they have none, to the neareſt in blood to the grand-mother.

THE marriages of the Gentoos are conducted with the utmoſt ſplendor and extravagance; the little bride and bridegroom, who are frequently only three or four years old, are, for ſeveral nights, carried through the ſtreets, richly dreſſed, and adorned with the fineſt jewels their parents can procure, preceded by flags, muſic, and a multitude of lights. The aſtrologer having fixed on a fortunate hour, they are taken to the houſe, where the father of the little wife lives, and, being ſeated oppoſite to each other, with a table between, they join their hands acroſs it, and the prieſt covers both their heads with a kind of hood, which re-

---

" ſatisfied with rendering marriage as little burthenſome as " poſſible; they give a wife amongſt many men, which con- " ſequently diminiſhes the attachment to a family and the " cares of houſe-keeping, and leaves them in the free poſſeſſion " of a military ſpirit."

mains

mains ſpread over them, about a quarter of an hour, while he prays for their happineſs, and gives them the nuptial benediction; after which their heads are uncovered, and all the company are ſprinkled with roſe water and perfumes. The evening concludes with a magnificent entertainment, and ſometimes their feſtivals laſt ſeveral days.

THE Gentoo women treat their huſbands with extraordinary reſpect and tenderneſs; their conduct is, in general, blameleſs, and very few are ever known to violate the marriage-bed. They are intirely in the power of their huſbands, to whom they bring no other fortune beſides their cloaths, and perhaps two or three female ſlaves. They begin to bear children at twelve years of age, and ſometimes younger; for Mr. *Groſe* ſays, he has ſeen them pregnant in their tenth year; but then their teeming time is ſoon over. They ſeldom have any children, after they are thirty years old, and frequently, before that time, intirely loſe their bloom, and all that plumpneſs and delicacy for which they are juſtly remarkable.

WITH reſpect to the funerals of the Gentoos, ſome of them bury the body, and others burn it. Mr. *Groſe* ſaw both theſe ceremonies performed, when at Bombay. The firſt he mentions was one who buried his wife, a young woman of about twenty years of age. Thoſe who accompanied the huſband, dug a pit in the form of a well; on one ſide of which was a niche for the corps to be placed in a ſitting poſture, with room ſufficient for a plate of raw rice, and a jarr of water by her ſide. The pit was no ſooner ready, than ſhe was put into it, with all her cloaths and jewels, exactly as ſhe wore them when alive; but ſhe was no ſooner placed, than her huſband, who ſtood by, jumped into

into the grave, and very compoſedly took off all her jewels, and brought them up with him; after which the pit was filled up.

THE ceremony of burning is performed in this manner: Having waſhed the corpſe, and dreſſed it in the cloaths the perſon uſually wore, the relations and friends carry it on a beir to a ſmall diſtance from the town. This is uſually done the next day; and if a perſon died in the morning, his body is ſometimes burnt the ſame evening; for, in theſe hot countries, a corpſe will not keep long. The funeral pile is uſually prepared near ſome river or pond, and, if he be a perſon of wealth, great quantities of fragrant wood are mixed with the reſt. Mr. *Groſe* was preſent at burning the corpſe of a youth of about eighteen years of age, the ſon of a Banian. The funeral pile was prepared on the beach, the father aſſiſting at it bare-headed, with the little cloaths he had on coarſe and torn, which is their general manner of mourning. As ſoon as the corpſe is placed on the pile, and ſome prayers muttered by the attending Bramin, fire is ſet to it at one of the corners, when it ſoon blazes up and conſumes the body to aſhes, without any noiſome ſmell. What drew my attention moſt, ſays the above author, was the behaviour of the father, who, according to the Gentoo cuſtom, of it's being always the next and deareſt relation that ſets fire to the pile, walked thrice round it, with a ſort of deſperate haſte, and then, with his face averted, thruſt his hand behind him, and gave fire to it; after which, with the appearance of the utmoſt agony, he rolled himſelf in the ſand, beating his breaſt.

THE cruel cuſtom of the women publicly burning themſelves, at the death of their huſbands, is ſtill practiſed in ſome places, though the Moguls have

have endeavoured to abolish it. *Mandesło*, a traveller of undoubted veracity, gives the following description of one of these funeral rites at which he was present: "A young woman, twenty years "of age, having been informed that her spouse "died at two hundred leagues distance, resolved "to celebrate his obsequies by burning herself "alive. In vain was it represented to her, that "the news was uncertain; nothing was capable "of making her change the resolution she had "taken. We saw her arrive at the place of her "suffering with so extraordinary a gaiety and con-"fidence, that I was persuaded she had stupified "her senses with opium. At the head of the re-"tinue which accompanied her, was a band of "the country music, composed of hautboys and "kettle-drums. After that came several married "women and maids singing and dancing before "the widow, who was dressed in her richest cloaths, "and had her neck, fingers, arms, and legs, loaded "with rich jewels and bracelets. A troop of men, "women, and children followed, and closed the "procession. She had washed herself before in "the river, that she might join her husband with-"out any defilement or stain. The funeral-pile "was made of apricot-wood, with which they "had mixed branches of sandal and cinnamon. "She beheld it afar off with contempt, and ap-"proached it without being disturbed: she took "leave of her friends and relations, and distributed "her ornaments amongst them. I kept myself "near her on horse-back, along with two English "merchants. Judging, perhaps, by my counte-"nance, that I was sorry for her, to comfort me "she threw me one of her bracelets, which I luckily "catched hold of. When she was seated on the "top of the pile, they set fire to it, and she poured

"on

" on her head a veſſel of ſweet-ſmelling oil, which " the flame immediately ſeized on: thus ſhe was " ſtifled in a moment, without being obſerved to " alter her countenance. Some of the aſſiſtants " threw in ſeveral cruſes of oil to increaſe the fire, " and filled the air with frightful cries. When " ſhe was intirely conſumed, her aſhes were thrown " into the river."

It has been ſaid, that this inhuman cuſtom was introduced by the Indian Gentoos, to put a ſtop to the cruelty of the wives, who frequently poiſoned their huſbands; but Mr. *Groſe* obſerves, that their minds are generally too ſoft and tender, to incur even the ſuſpicion of their being inclined to ſuch acts of cruelty; and adds, that their ſuperſtition and extreme fondneſs for their huſbands is the ſole cauſe. This, ſay he, is owing to their early marriage, after which the parties, in the tenderneſs of the ductile age of childhood, are brought up, till that of conſummation, in the conſtant inculcation of mutual tenderneſs, as a ſacred point of religion; and the women, eſpecially, retain ſuch ſtrong impreſſions of this doctrine, that numbers of them readily embrace the cruel practice of burning themſelves with their huſbands. Some of them, living under governments where this barbarous act of ſuperſtition was not ſuffered, have voluntarily gone to Gentoo countries, merely to enjoy the liberty of performing it. It muſt not, however, be underſtood, that this practice of voluntarily burning is very general, many of the lower tribes being intirely exempted from it; and it is only with reſpect to the more conſiderable perſonages, that it is ever uſed.

It is remarkable that the Gentoos give an unbounded toleration to thoſe that differ from them, even in thoſe religious points, which they eſteem

moſt

moſt ſacred: for it is a fundamental tenet of their religion, that a diverſity of modes of worſhip is agreeable to the God of the univerſe: that all prayers put up to him by man are equally acceptable, when ſanctified by the ſincerity of the intention; and that, the true univerſal religion being only that of the heart, the various outward forms of it are, in themſelves indifferent. Hence, inſtead of perſecuting others, for not being of their religion, they will admit of no proſelytes.

THERE is a religious order among the Gentoos called Faquirs, and, in India, Gioghies; theſe are a kind of mendicant friars, who make vows of poverty and celibacy, and ſeem inſenſible both to pleaſure and pain. To obtain the favour of Brama, a ſubordinate deity, they ſuffer the moſt dreadful tortures, and the auſterities ſome of them undergo are incredible to thoſe that have not been eye-witneſſes of them: ſome ſtand for years upon one foot, with their arms tied to the beam of a houſe, or branch of a tree, by which means their arms ſettle in that poſture, and ever after become uſeleſs; ſome ſit in the ſun, with their faces looking upwards, till they are incapable of altering the poſition of their heads: the people, in all theſe caſes, making a merit of feeding them.

THE ordeal trials of melted lead, or boiling oil, as practiſed in India, are conſidered by the Gentoos as a ſtanding miracle. The ceremony is performed with great ſolemnity. The party who has appealed to this trial for his innocence, whether on ſuſpicion of murder, theft, conjugal infidelity in the women, or even in denying a debt, is publicly brought to the ſide of the fire, on which is a veſſel of boiling water or oil, but moſt commonly melted lead. The prince or magiſtrates of the country being preſent, his hand is previouſly clean waſhed, and a leaf of the

the brab-tree, with the accuſation written upon it, is girt round his waiſt, and then, on a ſolemn invocation of the deity by a Bramin, the perſon plunges in his hand, ſcoops up the boiling fluid, and if he draws it out unhurt, he is abſolved; otherwiſe he receives the puniſhment preſcribed by the laws, for the crime with which he is charged. And ſo firmly believed is this method of purgation on that coaſt, that Mr. *Groſe* obſerves, that even ſome of the Indian Chriſtians and Moors have voluntarily ſubmitted their cauſe to it's deciſion.

It will be proper to take ſome notice here of the luxurious lives of the inhabitants of this country. The Moguls and principal Mooriſh courtiers generally affect great ſtate and ſplendor, taking care to have their harams or ſeraglios furniſhed with the moſt beautiful women that can be produced. Their taſte for beauty is pretty ſingular, for they ſcarcely ſcruple any price for a female ſlave, who, with her other beauties, has a plumpneſs that covers the ſmalleſt bones. They are extremely jealous of their women, and follow the uſual Aſiatic cuſtom of committing them to the guard of eunuchs, who are generally made ſuch by a total abſciſion; and the blackeſt Abyſſinians are preferred, both on account of their colour and fidelity.

Their moſt uſual method of travelling is in palanquins, which conſiſt of a bed and bedſtead, covered with a canopy of cloth or velvet, faſtened by croſs ſticks, and cords of ſilk or cotton, to an arch of bamboo, from the ends of which proceed the poles. It is impoſſible to conceive a more indolent method of conveyance; the perſon carried may conveniently ſit upright, and be bolſtered up in that poſture by one or two large pillows, and occaſionally he may lie at his whole length, and

ſleep

ſleep by the way. Some of the palanquins are rendered very expenſive, from the decorations employed on them, in the richneſs of the ſtuff, the gold or ſilver taſſels, and the carving of the feet. The ends of the poles are carried by ſix, or more commonly four bearers, and are carved and plated.

SOME Engliſh gentlemen at Calcutta, diſliking the indolent attitude, in which people are thus carried, have invented, inſtead of a bedſtead, a platform that ſupports an armed chair, in which they ſit more decently, under the canopied arch. The jealouſy of the Moors makes them cover the palanquins, in which their women are carried, with a various-coloured ſilk netting, thrown looſely over the whole machine; which, without excluding the air, or obſtructing the ſight from within, only hinders thoſe without from ſeeing them.

THERE are in this country ſeveral other methods of carriage, one of which is the Hackree, drawn by oxen, ſome of which will go as faſt as horſes on a full trot. Theſe are chiefly uſed by the Gentoos, eſpecially by the merchants of Surat. Theſe oxen, which are generally white, and very large, are kept as ſleek and clean as poſſible; and, as a contraſt to the whiteneſs of their ſkins, they paint their horns with a ſhining black, and hang bells about their necks. The hackrees are open on three ſides, covered on the top, and made to hold two people ſitting croſs-legged, with a pillow at their backs to recline upon. Their women are in theſe machines concealed by folding blinds, or painted cloth falling down the open ſides. Each hackree has it's driver; but in Bengal, the moſt eminent of the Gentoo merchants ride on horſeback, or in a chaiſe, richly ornamented, and the reins adorned with ſilver or gold ſtuds. The beaſts, commonly uſed for draught and carriage, are oxen,

which

which are ſwifter of foot than ours, and will carry a man twenty or thirty miles a day; and there are caravans of them, which ſometimes amount to eight thouſand. Camels are alſo uſed for carriage, though leſs frequently.

AT feſtivals and on other occaſions, it is uſual to ſend for the dancing girls, who ſing and dance before the company, and readily retire with any young man that deſires it. They act love ſcenes in character dances, with no deſpicable expreſſion; and, in ſome of their dances, throw themſelves into many laſcivious attitudes. They alſo act comedies in the open air, by torch-light, nor are they ill performed; love and gallantry are the uſual ſubjects. Their dreſs is the moſt ſplendid and alluring that can be imagined. They are generally loaded with jewels from head to toe; for on their toes they wear rings. Their necks are adorned with carcanets, their arms with bracelets, and their ancles with chains of gold and ſilver, generally inriched with precious ſtones. They wear alſo noſe-jewels, which at firſt have an odd appearance, but to which the eye is ſoon reconciled. They, as well as other women in that country, have a peculiar way of covering their breaſts, which make no inconſiderable part of their finery. They encloſe them in a pair of caſes exactly fitted to them, and made of a very light wood linked together, and buckled on at the back. Theſe confine the breaſts, and prevent their growing to a diſagreeable ſize, and yet, from their ſmoothneſs and pliancy, play freely with every motion of the body: they are beſides gilt, and ſet with gems, according to the ability of the wearer, and thus compoſe the richeſt part of their dreſs, from the diſplay favoured by their orbicular form; at the ſame time they

they are eaſily laid aſide and reſumed at pleaſure. Many of them uſe the ancient embelliſhment, practiſed through the greateſt part of the Eaſt, of forming a black circle round the white of the eyes, by drawing a bodkin between them and the eyelids, that both may receive the tint of the powder of antimony, that ſticks to the bodkin. They pretend that this refreſhes and cools the eyes, beſides increaſing their luſtre by the ambient blackneſs. The dancing girls occaſionally aſſume another ornament compoſed of a necklace of many looſe turns, formed of flowers ſtrung together, that reſemble double Spaniſh jeſſamin, but have a ſtronger and more agreeable fragrance, and are far preferable to any perfumes.

THE Zamorin or Samorin of Calicut is the moſt powerful of all the Mallabar princes; and, according to ſome authors, when he marries, he muſt not cohabit with his bride, till the chief prieſt has enjoyed her, for which ſervice he receives five hundred crowns; and, if he pleaſe, he may have her company for three nights; becauſe the firſt fruits of her nuptials muſt be an holy oblation to the deity ſhe worſhips. The Naires or Nobles, who take a maid to wife, alſo pay the clergy for doing them the ſame favour.

ON the back of the Samorin's dominions, and contiguous to them, is the country of the Raja of Sarimpatam, where it has been a conſtantly received law, never to make any but a defenſive war; and, even then, not to kill a man, though in battle; inſtead of which, they practiſe a ſingular method of fighting, which is attended with ſuch ſucceſs, that they have never yet been ſubdued. Their warriors are trained up to a particular dexterity in cutting off the noſes of their enemies in an engagement; and the dread of in-

to

curring this deformity, has proved sufficient to keep neighbours, not more martial than themselves, from disturbing their tranquillity.

By the constitution of Attinga, the country is to be always governed by a queen, who must never marry; but, that heiresses of her blood may not be wanting, she may admit whom and as many as she pleases to the honour of her bed; her seraglio is, therefore, generally composed of the handsomest young men of her court. The sons have the rank of nobility, and none but the daughters have any title to the succession. The custom of the women not being allowed to cover any part of their breasts, which is generally observed in the countries of Malabar, is here more rigorously practised than in many other places; and the covering them is such an offence, that a woman of that country, having been some time in an European settlement, where she had conformed to the fashions, unhappily continued the concealment of her breasts after her return home; but, coming into the queen's presence, Mr. *Grose* says, she had the cruelty to order them to be cut off, for her daring to appear before her with such a mark of disrespect to the established manners of her country.

CHAP. IV.

Of CHINA and JAPAN.

FROM the Indies we naturally proceed to the vaſt, ancient, and opulent empire of China, ſituated on the moſt eaſtern part of the Aſiatic continent. The origin of the Chineſe nation is very uncertain and diſputed, for what their peculiar tradition ſays of it is exploded by men of ſenſe, ſince they pretend to an antiquity anterior not only to the flood, but even to the creation. By ſuch of their records, however, as may be moſt depended on, and are univerſally agreed to by all their learned men, this empire appears to have been governed by it's own monarchs above four thouſand years, not by a continued ſeries of them in one family, but by a ſucceſſion of twenty-two families, which have given it in the whole two hundred and thirty-ſix princes.

THE diſcovery of this remote country was made by the Portugueſe about two-hundred years ago; for, though indeed it was in ſome meaſure known to the ancients, yet it's great diſtance from Europe, and the old Chineſe policy not to admit ſtrangers among them, made it impoſſible for either the Greeks, the Romans, or any other nation on this ſide the Ganges, to know any thing of the country or it's inhabitants, except what they might gueſs from the commodities brought from thence, which were very few in compariſon of thoſe at preſent exported. When the vaſt improvements in navigation had opened the Europeans a new way of commerce with China, they were ſo greatly ſurprized at it's opulence, and the excellent genius

and

and politeneſs of it's inhabitants, (eſpecially conſidering them as a people that lived wholly within themſelves, and had received no helps or inſtructions from other nations) that the accounts firſt brought us concerning them had more the air of romance than truth. Nor were we thoroughly acquainted with the ſtate of the Chineſe nation, till the Jeſuits and other miſſionaries of the church of Rome introduced themſelves into favour with the emperor and perſons of the higheſt rank, by their ſuperior ſkill in the mathematical ſciences. It is to theſe gentlemen we owe moſt of our knowledge of the true ſtate of China, and particularly to *Le Compte* and *Du Halde*, which laſt author has given us the moſt exact and fulleſt account we now have of this great and celebrated empire.

WE have choſen to ſpeak of Japan and China together, as imagining that our little knowledge of the former would ſcarce furniſh us with materials for a ſeparate chapter.

THIS empire, which we call *Japan* or *Japon* indifferently, conſiſts of many iſlands lying eaſtward of China; the principal of which is Niphon, though whether this be really an iſland, or joined on the north to the Aſiatic continent, is a queſtion that has been much diſputed, and not yet thoroughly determined. But our buſineſs is not geography, but to give an account of the curioſities of theſe countries, which we ſhall do in our uſual method.

VOLCANOES, CATARACTS, SPRINGS, and WHIRLPOOLS.

IN China there are ſeveral volcanoes or burning mountains, the moſt remarkable whereof is that called Linoſung, which is of a great height,

and vomits fire, cinders, aſhes, and ſometimes torrents of ſulphur and other minerals.

JAPAN is alſo remarkable for it's burning mountains: particularly near Firando, is a ſmall rocky iſland, that has been burning and trembling for many centuries: at a ſmall diſtance from the coaſt is alſo a ſmall iſland, on which is a volcano that has been burning, at different intervals, for many ages. On the ſummit of a mountain in the province of Figo, a perpetual flame continually iſſues. Sometimes a black ſmoke, accompanied by a very diſagreeable ſtench, is obſerved to iſſue from the top of a famous mountain called Feri. This mountain is ſaid to be nearly as high as the pike of Teneriff; but, in ſhape and beauty, is ſuppoſed to have no equal, and it's top is covered with perpetual ſnow. Unſen is a large though not very high mountain, near Timabra; it's top is conſtantly bare, and of a whitiſh colour, from the ſulphur upon it; and it's ſmoke may be diſcerned at the diſtance of ſeveral miles. The earth is in ſeveral places burning-hot, and is ſo looſe and ſpungy, that, except on a few ſpots, where trees grow, one cannot walk over it, without being in continual fear, from the crackling hollow noiſe perceived under foot. It's ſulphureous ſmell is ſo ſtrong, that, for the ſpace of many miles round, there is not a bird to be ſeen; and when it rains, the water is ſaid to bubble up, and, the whole mountain to appear as if boiling.

EARTHQUAKES are ſo frequent in Japan that the natives dread them no more than the Europeans do ſtorms of thunder and lightning; and ridiculouſly imagine them to be cauſed by a huge whale creeping under the ground. Yet the ſhocks are ſometimes ſo violent, and laſt ſo long, that whole cities are deſtroyed, and many thouſands of the

the inhabitants buried under the ruins. Particularly in the year 1703, an earthquake, attended by a great fire, which broke out at the ſame time, deſtroyed almoſt the whole city of Jedo, together with the king's palace, and two hundred thouſand of the inhabitants.

FROM what has been already ſaid, with reſpect to the volcanoes and earthquakes, it is not at all ſurpriſing, that there are many hot baths in different parts of Japan; ſome of which are ſaid to have extraordinary virtues, and to cure external and internal diſeaſes.

IT ought not to be omitted that on the coaſt of Japan are two remarkable and dangerous whirlpools. One, near Simabara, is at high water even with the ſurface of the ſea; but the tide no ſooner begins to ebb, than, after ſome violent turnings, it is ſaid ſuddenly to ſink to the depth of fifteen fathoms, ſwallowing up, with great force, the ſhips, boats, and, in ſhort, whatever comes within it's reach, daſhing them to pieces againſt the rocks at the bottom, where they ſometimes remain under water, and at others are thrown out again at ſeveral miles diſtance. The other, which lies near the coaſt of the province of Kijnokuni, ruſhes with a loud, boiſterous noiſe, about a ſmall, rocky iſland, which by the violence of the motion is kept in a perpetual trembling. But, though this has a very formidable appearance, it is eſteemed leſs dangerous than the other; for, it's noiſe being heard at a conſiderable diſtance, it may be eaſily avoided.

As to the ſprings of China, the inhabitants have reaſon to wiſh that they were more and better. The common water is not good, which, *Le Compte* obſerves, perhaps obliges the inhabitants, eſpecially thoſe of the ſouthern provinces, to boil it

and drink it warm; but, as warm water is unpalateable, they thought of putting some leaves of a tree to it, to render it more pleasant; those of tea, he says, seemed to be the best; and from thence he accounts for their drinking of tea. Some of the springs are said to ebb and flow as regularly as the sea: but their scarcity renders them extremely valuable, and if the inhabitants have the good fortune to discover a spring, they husband it with the utmost precaution and care. They retain it within banks, and, that all the country may reap the benefit of it, turn it here and there, a hundred different ways; so that a rivulet, well managed, gives fertility to a whole province.

CHINA has, however, many rivers, the largest of which is the Kiam, which rises in the province of Yun-nan, crosses three other provinces, and, having run a winding course of twelve hundred miles, discharges itself into the Eastern ocean. The passage along it is extremely dangerous, and many ships are lost in it. In it's course, which is exceeding rapid, it forms a multitude of islands, that are of great benefit from the bullrushes that grow upon them, which are ten or twelve feet high, and serve the neighbouring cities for fuel.

ANOTHER is called the yellow river, because the earth it sweeps away with it, especially in great rains, gives it that colour. It rises at the extremity of the mountains that bound the province of Se-tchuen, in the west, from whence it throws itself into Tartary, where it flows for some time on the outside of the great wall, and re-enters China, between the provinces of Chansi and Chensi. After that it waters several other provinces; and, having flowed eighteen hundred miles, discharges itself into the Eastern ocean, near the mouth of the Kiam. This river is very broad and rapid,

rapid, but of no extraordinary depth. Beſides theſe there are many others that are leſs famous, but more commodious for trade and commerce. Among the other rivers is one near the city of Hoayming-ham, where it falls down three precipices one after another, with ſuch a roaring noiſe and violence, as is more eaſy to conceive than to deſcribe. There are alſo many lakes, ſome of which are of conſiderable extent, and afford great variety of fiſh.

FOSSILS.

THE mountains of China abound with variety of metals and minerals, and amongſt the reſt they have gold and ſilver, but their gold mines are not ſuffered to be opened, and yet they have plenty of that commodity, by reaſon of the great quantities of it waſhed down by torrents from the mountains in the rainy ſeaſons, and caught by fleeces and other ſtrainers laid acroſs the water, or found among the ſand and mud of their rivers. Multitudes of people live wholly by this buſineſs of gathering gold, which is ſaid to be ſo pure as to need no refining. It is probable they prohibit the working of their gold mines, that they may have a reſerve of that metal in caſe of need, having at preſent more than enough for their own uſe, and a conſtant ſupply of it brought into their country from Europe and other parts. They have alſo mines of copper, iron, quick-ſilver, and ſome lead; but this laſt metal is very ſcarce, as appears by our Engliſh lead finding ſo quick a market in China. Beſides theſe metals they have ſeveral compound ones, the manner of mixing which they keep as a great ſecret; particularly that called tonbaga or donbaga, which is of the colour of very pale braſs, or a dull kind of tin, and to which they

aſcribe ſeveral extraordinary virtues, as thoſe of expelling poiſon, ſtopping hæmorrhages, and the like, merely by wearing it in the form of a ring or necklace.—The mountains of Japan are likewiſe inriched with mines of gold and ſilver, which they yield not only in large quantities, but of an extraordinary fineneſs. The copper of Japan is excellent, but it is ſaid they ſpoil their braſs by too much refining. They have alſo tin, lead, and iron, and quarries of ſeveral ſorts of marble; nor are they without ſtones of a more precious nature, but of ſuch we have ſpoken ſufficiently in the preceding chapter.

IN ſeveral parts of the province of Honan in China there is found a ſort of ſalt-earth, which being boiled and cryſtallized makes a very good white ſalt; and in ſome places the ground, after rain, ſpews up a kind of froth, which is made into an excellent ſoap. The province of Quangſi is famed for a yellow earth, which taken inwardly expels poiſon, and by outward application cures the bite of venomous creatures. There is alſo a ſort of earth of a fine red like vermilion, and another of a fine white, which are uſed as coſmetics by the ladies. The ſame province furniſhes in great abundance that valuable earth or clay of which they make their porcelane or China ware, ſo much eſteemed and uſed amongſt us, being the moſt beautiful earthen manufacture of any in the world, though it has of late been well imitated in Europe *. This earth is of two kinds, the one called

* The firſt eſſays to imitate porcelane were made at Rouen in France, and a manufacture of this kind is now carried on at St. Cloud near Paris, where M. *Savary* ſays they make porcelanes to ſuch perfection, that nothing is wanting to render

called kaulin, which is full of glittering corpuſcles; the other called petunſe, which is of a plain white, exceeding fine and ſoft to the touch. Both theſe earths, or rather ſtones, are found in quarries twenty or thirty leagues from Kingteching, to which place they are brought down the river by a vaſt number of little barks continually employed in that ſervice. The petunſe is cut out of the mine in form of bricks, and is much harder than the kaulin, which laſt notwithſtanding is what gives the ſtrength and firmneſs to the porcelane. The mines of the kaulin are deep, wherein it lies in glebes or clods; and the mountains whence it is dug are covered with a reddiſh earth. — As to the manner of preparing theſe earths, and the whole proceſs uſed in making of porcelane, we ſhall deſcribe it when we come to ſpeak of the manufactures of China and Japan, both countries being famous for this commodity.

---

der them of equal value with the Chineſe, but to be brought five or ſix thouſand leagues. In effect, for the fineneſs of the grain of the matter, the beautiful turn of the veſſels, the exactitude of the deſign, and the luſtre of the colours, at leaſt the blues, the French are not much behind the Chineſe. But their great defect is in the white of the ground, which is uſually dull and dingy, and eaſily diſtinguiſhed from the pure ſprightly white of the Chineſe veſſels. — The Saxons ſeem to have exceeded the French in this attempt, for they have a manufactory at Meiſſen, which the baron *de Pollnitz* aſſures us produces porcelanes painted and enamelled in ſuch perfection, that they are more beautiful, as well as dearer, than thoſe of China itſelf. We ſhould not do juſtice to our country, did we not add that England has of late years excelled in imitating this brittle furniture, which is made in Warwickſhire, at Chelſea and Bow, ſome of which eſpecially that of Chelſea and Warwickſhire greatly exceed, with reſpect to the beauty of the painting, that made by the Chineſe.

VEGETABLES.

OF all the vegetable productions of China or Japan, the tea-plant, or tcha, as they call it, deſerves firſt to be taken notice of, as it's leaves afford us ſuch a favourite liquor by infuſion, that it is daily uſed amongſt us almoſt univerſally, and by people of all ranks and conditions. This ſhrub, which ſeems to be a ſpecies of myrtle, ſeldom grows beyond the ſize of a roſe-buſh, or at moſt ſix or ſeven feet in height, though ſome have extended it to a hundred. It affects a gravelly ſoil, and is uſually planted in rows upon little hills about three or four feet diſtant from each other. It's leaves are about an inch and a half long, narrow, tapering to a point, and indented like our roſe or ſweet-briar leaves, and it's flowers are much like thoſe of the latter. The ſhrub is an evergreen, and bears a ſmall fruit, which contains ſeveral round blackiſh ſeeds, about the bigneſs of a large pea, but ſcarce above one in a hundred come to perfection. By theſe ſeeds the plant is propagated, nine or ten of them being put into a hole together, and the ſhrubs thence ariſing are afterwards tranſplanted into proper ground. They thrive beſt when expoſed to the ſouth ſun, and yield the beſt tea; but there is a ſort that grows without any cultivation, which, though leſs valuable, often ſerves the poorer ſort of people.

THE Chineſe know nothing of Imperial tea, and ſeveral other names, which in Europe ſerve to diſtinguiſh the goodneſs and price of this faſhionable commodity. In truth, though there are various kinds of tea, they are now generally allowed to be the product of the ſame plant, only differing in colour, fragrancy, &c. according to the difference

ence of ſoil, the time of gathering it, and the method of preparation. The Vowi, Bohi, or Bohea tree is ſo called, not from the mountains of Fokien, where the beſt of that ſort is ſaid to grow, but from it's dark or blackiſh colour. This chiefly differs from the green tea, by it's being gathered ſix or ſeven weeks ſooner, that is, in March or April, according as the ſeaſon proves, when the plant is in full bloom, and the leaves full of juice; whereas the other, by being left ſo much longer on the tree, loſes a great part of it's juice, and contracts a different colour, taſte, and virtue, being more rough to the palate, and raking to the ſtomach. The green tea is moſt valued and uſed in China, and the Bohea ſeems not to have been known there ſo long as two centuries ago; for a judicious Hollander, who was phyſician and botaniſt to the emperor of Japan, about a hundred and fifty years ago, tells us he had heard of the Bohi or black tea being come into vogue in China; but, upon the ſtricteſt ſearch he could make, could find no ſuch thing, and therefore believed it was a falſe report. This makes it probable, that originally they gathered all the tea at the ſame time, but that, ſince the diſcovery of t'.. ſmoothneſs and excellence of the more juicy Bohea, they have carried on their experiments ſtill farther, by gathering it at different ſeaſons; for Dr. *Cunningham*, phyſician to the Engliſh factory at Chuſan, gives us an account in the Philoſophical Tranſactions, that the Bohea, which he calls the firſt bud, is gathered at the beginning of March, the Bing or Imperial in April, and the Singlo or green in May and June. It is farther to be obſerved, that what the doctor ſtiles the firſt bud is indeed the fineſt of the Bohea kind, and that there are ſeveral degrees of coarſeneſs in the leaves after they are full-blown

and

and expanded; for, during all the months of gathering, the leaves on the top of the ſhrub are the fineſt and deareſt, and are gradually coarſer the nearer to the bottom — As to the manner of curing the tea, the Bohea is firſt dried in the ſhade, and afterwards expoſed to the heat of the ſun, or over a ſlow fire, in earthen pans, till it is convolved or ſhrivelled up (as we ſee it) into a ſmall compaſs. The other ſorts are commonly dried and criſped in the ſun as ſoon as gathered; though according to Dr. *Cunningham* the Bohea is dried in the ſhade, and the green in pans over the fire.

IT is very rare to find tea perfectly pure, the Chineſe generally mixing other leaves with it to increaſe the quantity; though one would think the price is too moderate to tempt them to ſuch a cheat, it being uſually ſold amongſt them for threepence a pound ſterling, and never more than ninepence; ſo that it is moſt probable the worſt adulterations of it are made by our own retailers. Bohea tea, if good, is all of a dark colour, criſp and dry, and has a fine ſmell: green tea is alſo to be choſen by it's criſpneſs, fragrant ſmell, and light colour with a bluiſh caſt, for it is not good if any of the leaves appear dark or browniſh. — As to the properties of tea, they are very much controverted by our phyſicians*; but the Chineſe reckon

* Dr. *Quinſey* ſpeaks of tea, particularly the green, as one of the wholſomeſt vegetables that ever was introduced either into food or medicine: But Dr. *James* ſays, that whatever virtues are aſcribed to tea, or however uſeful as a medicine it may be in China, he is very certain, that either the tea, or the warm water, or both, are extremely prejudicial as an habitual drink in England; inſomuch that he has known many hyſterical caſes relieved, and ſome cured, by leaving off tea, without taking any remedy whatever; and one in particular, which was attended

reckon it an excellent diluter and purifier of the blood, a great ſtrengthener of the brain and ſtomach, a promoter of digeſtion, perſpiration, and other ſecretions, particularly a great diuretic, and cleanſer of the reins and urethra. They drink large quantities of it in fevers, in ſome ſorts of cholics, and other acute diſeaſes; and think it corrects the acrimony of the humours, removes obſtructions of the viſcera, and reſtores decayed ſight. That the gout and ſtone are unknown in China is aſcribed to the uſe of this plant; which is alſo ſaid to cure indigeſtions, to carry off a debauch, and to give new ſtrength for drinking *. Some of the virtues attributed to tea are undoubtedly imaginary, and it has ill effects upon ſome conſtitutions; but experience ſhews, that ſeveral advantages attend the drinking of it with diſcretion. It

---

tended with terrible convulſions. A great many people (continues the doctor) upon drinking a quantity of tea find themſelves affected with flatulencies, to remove which they take hartſhorn, ſpirits of lavender, or ſome cordial; and when theſe do not relieve the lowneſs of ſpirits cauſed by theſe flatulencies, they are obliged to have recourſe to wine, and then to drams, a ſlow but very certain poiſon. With the doctor's leave, however, the inconveniencies he mentions, and ſeveral others aſcribed to the drinking of tea, ſeem rather owing to the unſeaſonable and exceſſive uſe of it, a want of regard to particular tempers and conſtitutions, and ſuch-like indiſcretions, than to any pernicious quality in the plant itſelf.

* *Sim. Pauli*, phyſician to the king of Denmark, in an expreſs treatiſe on the tea-plant, endeavours to ſhew, that theſe virtues aſcribed to it in the Eaſtern countries are only local, and do not hold with the inhabitants of Europe: But herein, as *Le Compte* obſerves, he is contradicted by experience; and *Pechlin*, in a treatiſe on tea, has refuted his opinion.—After all, it is worth obſerving, that the Dutch dry and prepare their ſage like other teas, and ſell it to the Chineſe, who, for every pound of ſage tea, give three or four pounds of theirs, preferring it to the beſt of their own growth.

quickens

quickens the ſenſes, prevents drowſineſs, corrects the heat of the liver, removes the head-ach, eſpecially that proceeding from a crapula, and, being gently aſtringent it, ſtrengthens the tone of the ſtomach.

As much as the Chineſe eſteem their tea, they ſeem to put a ſtill greater value upon the plant called ginſeng, which is very ſcarce, being only found in the province of Leaotung, and the neighbouring mountains of Tartary. It is in ſo much requeſt amongſt their phyſicians, that they have wrote many large volumes of it's virtues and given it the name of the ſpiritual plant, the pure ſpirit of the earth, the immortalizing plant, and ſuch-like pompous titles. *Martinius*, *Kircher*, *Tachard*, *Le Compte*, and all the writers of the Chineſe affairs, make mention of the ginſeng; and yet we knew but very little of this plant before father *Jartoux*, a jeſuit miſſionary in China, who, being employed by order of the emperor in making a map of Tartary, in the year 1709, had an opportunity of ſeeing it growing, and has given us a draught of it, with an accurate deſcription thereof, it's virtues, and the manner of preſerving and preparing it for uſe; which being a curious piece of natural hiſtory, the reader will not be diſpleaſed if we are a little particular on the ſubject.

THE ginſeng, as deſcribed by father *Jartoux*, has a white root, ſomewhat knotty, about half as thick as one's little finger; and as it frequently parts into two branches, not unlike the forked parts of a man, it is ſaid from thence to have obtained the name of ginſeng, which implies a reſemblance of the human form, though indeed it has no more of ſuch a likeneſs than is uſually ſeen among other roots. From the root ariſes a perfectly ſmooth and roundiſh ſtem, of a pretty deep red

red colour, except towards the surface of the ground, where it is somewhat whiter. At the top of the stem is a sort of joint or knot, formed by the shooting out of four branches, sometimes more, sometimes less, which spread as from a centre. The colour of the branches underneath is green with a whitish mixture, and the upper part is of a deep red like the stem, the two colours gradually decreasing till they unite on the sides. Each branch has five leaves; and it is observable, that the branches divide equally from each other, both in respect of themselves and of the horizon, and with the leaves make a circular figure, nearly parallel to the surface of the earth. All the leaves are finely jagged or indented, of a dark green colour above, and of a shining whitish green underneath, and on the upper side they are beset with small whitish hairs. From the centre of the branches proceeds a second stem or stalk, very straight, smooth, and whitish from the bottom to the top, where it bears a bunch of round berries, of a beautiful red colour, but not good to eat. The bunch that father *Jartoux* saw was composed of twenty-four berries, containing a white pulp, and two rough stones, of the size and figure of our lentils. The pedicles, on which the berries grow, arise from the same centre, and, spreading like the radii of a sphere, make the cluster of a circular form. As to the flower, our missionary never saw it, but some assured him it is white and very small. —This plant dies away every year, and it's age may be known by the number of stems it has shot forth, of which there are always some marks remaining on the root.

OUR author is of opinion, that the stone of the ginseng lies a long time in the ground before it takes root; and, if the woods in which it grows take

take fire and are consumed, the plant does not appear till two or three years after. It is not to be met with in plains, vallies, marshes, or places too much open and exposed to the sun; but is found on the declivities of mountains covered with thick forests, upon the banks of torrents, or about the roots of trees, and amidst a thousand other different sorts of vegetables *.

THE same father informs us, that the Chinese emperor, having a mind the Tartars should reap all the advantages to be made of the ginseng, gave orders in 1709 to ten thousand of those people to go and gather all they could find, on condition that each person should give him two ounces of the best, and that the rest should be paid for, weight for weight, in pure silver. It was computed that by this means the emperor would get that year twenty thousand weight of it, which would not cost him one fourth part of it's value. Father *Jartoux* met some of these Tartars in the deserts, and says this army of simplers observed the following order: After they had divided a tract of land among their several companies, they spread themselves out in a right line to a certain fixed place, every ten of them keeping at some distance from the rest; and in this order, going leisurely on, and looking carefully for the plant, they traverse the space of ground allotted them. When the time is expired, the mandarins or officers who

* From this account of father *Jartoux* concerning the ginseng, father *Lafiteau* was induced to look for the plant among the mountains and forests of Canada, and believed he found it; and we are told it has also been discovered by the English in Maryland. Be this as it will, we need be the less concerned for the want of this root, since we are assured that the noble hepatica or liverwort is endued with all it's principal virtues.

are

are appointed to inſpect and command them, and are incamped in ſuch places as are proper for the ſubſiſtence of their horſes, ſend to view the companies, to give them freſh orders, and to know if their number is compleat. If any one be miſſing, as it often happens, either by ſtraggling from the main body, or being attacked by wild beaſts, they make a careful ſearch after him, and then return to their former buſineſs. — To ſecure this profitable harveſt to the Tartars, it is ſaid the whole province where the ginſeng grows is encompaſſed by wooden paliſades, and guards are continually patrolling about, to hinder the Chineſe from ſearching after it: but, notwithſtanding all this precaution, the deſire of gain induces the Chineſe to ſteal into the deſerts where this plant grows, ſometimes to the number of two or three thouſand, at the hazard of loſing their liberty and all the fruit of their labour if they are taken, either as they go into or come out of the province.

THOSE who gather the ginſeng have little regard to the leaves, but carefully preſerve the root, burying together under ground all they can get of it in ten or fifteen days time. After this they waſh it well, and ſcour it with a bruſh; then dip it in ſcalding water, and prepare it in the fumes of a ſort of yellow millet, which gives it part of it's colour. The millet is boiled over a gentle fire in a veſſel with a little water, and the roots are laid over the veſſel upon ſmall tranſverſe pieces of wood, where they receive the ſteam, being covered with a linen-cloth. They may alſo be preſerved only by drying them in the ſun or by the fire; but then, though they retain their virtue well enough, they have not that yellow colour which the Chineſe admire. The roots muſt be kept cloſe

in

in a very dry place place, otherwiſe they are in danger of corrupting, or being eaten by worms.

THE ginſeng, as we have obſerved, is in the greateſt requeſt among the Chineſe phyſicians, who make it an ingredient in almoſt all the medicines they preſcribe for the nobility and the richer ſort of patients, it being too dear for the common people. They affirm that it is a ſovereign remedy for all weakneſſes, occaſioned by exceſſive fatigues either of body or mind; that it attenuates pituitous humours, cures weakneſs of the lungs and the pleuriſy, corroborates the ſtomach, and helps the appetite; that it diſpels fumes and vapours, fortifies the breaſt, and is a remedy for ſhortneſs of breath; that it ſtrengthens the vital ſpirits, is good againſt dizzineſs in the head and dimneſs of ſight, and prolongs life to extreme old age. Thoſe who are in health often uſe it, to render themſelves more ſtrong and vigorous.

IT is ſcarce to be imagined, that the Chineſe and Tartars would ſet ſuch a value upon this root, if they did not find it produce the moſt ſalutary effects. It is certain that it ſubtilizes, warms, and increaſes the motion of the blood; that it promotes digeſtion, invigorates, and removes wearineſs in a very remarkable manner*. The Chineſe ſeldom uſe more than a fifth part of an ounce of

* F. *Jartoux* tells us, that, having obſerved the ſtate of his pulſe, he took half a root of ginſeng raw and unprepared, and in an hour's time he found his pulſe much fuller and quicker, had a good appetite, was much more vigorous, and fitter for exerciſe or labour. Four days after this, finding himſelf ſo fatigued and weary that he could ſcarce ſit on horſeback, he took a like quantity, and in an hour after was not in the leaſt ſenſible of any wearineſs: from which time he often

of the dried root, when they give it to ſick perſons; but as for thoſe who are in health, and only take it for prevention or ſome ſlight indiſpoſition, our author adviſes them not to make leſs than ten doſes of an ounce, and not to take it every day. In order to extract it's virtues, the root is to be cut into thin ſlices, and put into an earthen pot well glazed, with about a pint of water. The pot muſt be well covered, and ſet to boil over a gentle fire; and, when the water is conſumed to the quantity of a cupful, it is to be ſweetened with a little ſugar, and drank off immediately. After this, as much more water is to be put into the pot, and boiled as before, that all the juice and ſpirituous parts of the root may be extracted. One of thoſe doſes is to be taken in the morning, the other in the evening.

THERE is a medical root, known to us by the name of China-root, as growing plentifully in that country, which had once an uncommon reputation for it's efficacy in curing the venereal diſtemper. It is of a pale red colour externally, but white within, of a farinaceous, earthy, and ſomewhat aſtringent taſte, and without any ſmell. It grows in fenny places, frequently overflowed by the ſea; which, upon it's retiring, leaves great quantities of it on the ſhore. The emperor Charles V. found conſiderable relief from this root,

---

often made uſe of it, and always with the ſame ſucceſs. He likewiſe obſerved, that the green leaves chewed, eſpecially the fibrous part of them, would produce nearly the ſame effect, and he prefers an infuſion of them before the beſt tea, having always found himſelf ſo well after drinking it. The colour of it is pleaſant, and after taking it twice or thrice the taſte and ſmell become very agreeable.

when

when afflicted with the gout and cachexy, which contributed greatly to raiſe it's character. It's credit as an antivenereal was firſt raiſed in the ſixteenth century, but ſeems to have been ſoon diminiſhed; for *Veſalius*, in a letter publiſhed in 1542, aſſures us, that decoctions of China-root were far inferior to thoſe of guaiacum for the cure of malignant venereal ulcers. And Dr. Aſtruc informs us, that in venereal caſes he could never produce any good effects by means of this root.

RHUBARB grows in all parts of China, and particularly near the great wall. It was formerly brought from China through Tartary to Aleppo, from thence to Alexandria, and at length to Venice; but we have it now from Ruſſia and the Eaſt-Indies. It is certain, that rhubarb was unknown to the ancients; for their rhapontic, which nearly reſembled it, was not really the ſame. It is ſaid, that the true rhubarb firſt puts out large downy leaves, then ſmall flowers in the form of ſtars, which are followed by the ſeed. When the root is newly drawn from the earth, it is blackiſh on the ſurface, and reddiſh within; but, when dried, it's outſide becomes yellow, and it's inſide of a nutmeg colour. It is pretty ſolid and ponderous, has a bitteriſh aſtringent taſte, and an agreeable aromatic odour. If it be good, it will tinge water almoſt like ſaffron, and when broke it appears of a lively colour, with a caſt inclining to vermilion. Some druggiſts have the infamous art of diſguiſing their old decayed rhubarb, by giving it a yellow tincture; but by handling it the cheat is diſcovered; for the powder they make uſe of will ſtick to the fingers. Rhapontic is often mixed with rhubarb, by thoſe who ſend it to Europe; but this impoſition may likewiſe be diſcovered, the true rhubarb being uſually in roundiſh pieces,

pieces, and it's internal grain or ſtreaks running tranſverſly, whereas rhapontic is in longiſh pieces, with it's ſtreaks running lengthwiſe; and beſides rhapontic, being chewed, leaves a clammineſs in the mouth, which rhubarb does not. This root is one of the beſt and mildeſt purgatives in nature, and very proper to ſtrengthen weak ſtomachs and the inteſtines. It is a good remedy for worms, evacuates the bile, and opens obſtructions of the liver; and, as it purges and ſtrengthens at the ſame time, is very ſerviceable in a looſeneſs. However it is not very proper where there is a feveriſh heat.

CHINA, as well as ſome parts of the Indies, produces great quantities of ginger, an aromatic root well known amongſt us, and of conſiderable uſe both as a ſpice and a medicine. The plant grows wild in many places near the ſea, but that which is cultivated is much better. It reſembles our ruſh both in ſtem and flower; and the root does not run deep into the ground, but ſpreads itſelf near the ſurface, in form not unlike a man's hand, and very knotty. When arrived at maturity, they dig it up, and dry it on hurdles, either in the ſun or an oven; they alſo comfit the root, when green, with ſugar and honey, having firſt ſteeped it ſome time in water, to take away part of it's acrimony, and diſpoſe it to let go it's outer ſkin. The Indians likewiſe eat it green by way of ſallet, firſt chipping it ſmall, mixing it with other herbs, and ſeaſoning it with oil and vinegar. They alſo make a marmalade of it, of which the Northern people make great uſe, eſteeming it excellent againſt the ſcurvy. The dried root is very hot and penetrating, diſcuſſes flatulencies, ſtrengthens the ſtomach and bowels, excites an appetite, promotes digeſtion, and reſiſts putrefaction.

To

TO the roots already mentioned we may add another called huchu, which indeed would be more remarkable than any of the reſt, if all were true that the Chineſe relate concerning it. Dr. *Cunningham* ſaw the root in the iſland of Chuſan, to which he ſays the natives aſcribe wonderful properties, as that of prolonging life, and turning grey hairs black, &c. by drinking an infuſion of it for a conſiderable time. They tell the following ſtory of the diſcovery of it's virtues: A certain perſon, ſay they, being once a ſimpling upon the mountains, he accidentally fell into ſuch a deep cavity, that he could by no means get out again; whereupon looking about for ſomething to ſupport life, in this melancholy condition he ſpied this root, and having eat thereof he found it ſerved him both for food and cloathing, by keeping his body in ſuch a temperature, that the injuries of the weather had no influence upon him during his ſtay there, which was ſeveral hundred years; till at laſt an earthquake happened in that place, whereby the mountains were rent, and he found out a paſſage to his own houſe, from whence he had been ſo long abſent: But ſo many alterations had happened there in ſuch a number of years, that the people at firſt gave no credit to his ſtory; till conſulting the annals of their family, which gave an account of one of them who was loſt about that time, they were convinced of the truth of his relation.—This ſtory ſhews the credulity of the Chineſe, of which we have already taken notice.

THE wood called ſantal or ſanders is another production of China, as well as of the kingdom of Siam. There are three ſorts of ſanders, white, yellow, and red, which are all produced by trees of the ſame kind, their different colours being ſuppoſed

ſuppoſed to ariſe from the difference of climates where they grow, or from the different parts of the tree from whence they are taken. According to many, the cortical part is the white ſanders, and the medullary part the yellow ſanders; but *Garcias* ſays they are had from two different trees, though ſo much alike that they cannot be diſtinguiſhed except by the natives. This, however, we are better aſſured of, that the tree producing yellow ſanders grows as high as our walnut-trees, bearing leaves reſembling thoſe of the lentiſk, bluiſh flowers, and fruit like a cherry, green at firſt, but blackening as it ripens, and of a faintiſh taſte. The white ſanders is the paler marrow of the ſame tree, which has not ſuch a fragrant ſmell nor aromatic taſte as the yellow ſanders, and is therefore leſs eſteemed. The red is the heart of another ſpecies of this tree, very ſolid and ponderous, but leſs odoriferous than either of the former. They are all reckoned refrigerating, drying, and cordial; and the red is pretty aſtringent.

But, of all the curioſities of the vegetable kind to be found in China, none ſeems more ſurpriſing than the tallow-tree, which produces a ſubſtance like our tallow, and ſerves for the ſame purpoſe. It is about the height of our cherry-trees, it's bark very ſmooth, it's trunk ſhort, the head round and thick, the branches crooked, and the leaves ſhaped like a heart, of a ſhining red colour. The fruit is incloſed in a kind of pod or cover like a cheſnut, which opens when it is ripe, and diſcovers three white kernels, of the ſize and form of a ſmall nut, each having it's peculiar capſula, and a little ſtone in the middle. When the fruit thus expoſes it's white kernels amongſt the red leaves, the mixture of the colours makes the tree appear exceeding beautiful: But the wonder is, that theſe kernels

kernels have all the qualities of tallow, it's ſmell, colour, and conſiſtence; and accordingly the Chineſe make candles of them, which would doubtleſs be as good as ours in Europe, if they knew how to purify their vegetable tallow as well as we do our animal. They prepare it for uſe by melting it down, and mixing a little oil with it, to render it ſofter and more pliant; but for want of better management theſe candles yield a thicker ſmoke and a dimmer light than ours. Theſe defects are owing in ſome meaſure to the wicks, which are not of cotton, but only a little rod or ſwitch of dry light wood, covered with the pith of a ruſh wound round it, which being porous ſerves to filtrate the tallow attracted by the burning ſtick, and thus keeps the flame alive.

THE white-wax tree is alſo of a very extraordinary nature. It is not ſo tall as the tallow-tree, from which it differs in the colour of the bark, which is whitiſh, and alſo in the ſhape of the leaves. It is remarkable that a ſmall kind of worm, fixing on theſe leaves, forms a ſort of comb, much ſmaller than the honey-comb, the wax of which is very hard and ſhining, and of far greater value than common bees-wax.

THERE is another tree which bears a fruit, from which is drawn an excellent oil. This tree has ſome diſtant reſemblance to the tea ſhrub, with reſpect to the ſhape of the leaf, and the colour of the wood; but greatly exceeds it in height and thickneſs. The berries, which are green, and of an irregular figure, contain certain ſeveral kernels.

THERE are two kinds of the varniſh-tree, both of them very different from thoſe of Japan. One of them called by the Chineſe tſichu, is of a ſmall ſize, with a whitiſh bark, and leaves reſembling

thoſe

thoſe of the wild cherry-tree. The gum which diſtils drop by drop, is like the tears of the turpentine-tree. If an inciſion be made in it, it will yield a much greater quantity; but this will ſoon deſtroy the tree. This varniſh is a ſtrong poiſon, and, though inferior to that of Japan, is much eſteemed by the artificers; it takes all colours alike, and, if it be will managed, neither loſes it's luſtre by the changes of the air, nor the age of the wood to which it is applied.

THE other ſort, called tongchu, nearly reſembles a walnut-tree, and bears a nut filled with a very ſoft pulp, that contains a thickiſh oil, which they ſqueeze out, and prepare for uſe, by boiling it with litharge. This, as well as the other varniſh, is ſuppoſed to have a poiſonous quality. It is often uſed, not only where the work is painted, but to varniſh wood, in order to preſerve it from the bad effects of rain, and to give a luſter to the floors of the emperor's apartments, and thoſe of the grandees.

ANOTHER remarkable tree is the kouchu, which reſembles the fig-tree, both, with reſpect to the wood, the branches, and the ſhape of the leaves; only the latter are larger, thicker and rougher on the upper ſide; and, on the under ſide, are covered with a fine down. This tree yields a milk, uſed by the Chineſe in gilding. To obtain it they make one or more horizontal inciſions in the trunk, and into the edge of the ſlits put the edge of a ſea ſhell, or ſome other receiver, into which the milk diſtils. When they uſe it, they dip a pencil in it, and draw what figure they pleaſe upon the wood, or any thing elſe, on which they afterwards lay leaf gold, which it ſo firmly cements, that it is ſaid the gold never comes off.

WE have ſpoken in the laſt chapter of the common pepper in uſe amongſt us *, which is the fruit of a plant of the reptile kind; but in China there is a ſort of pepper growing on a large tree, being about the ſize of a pea, of a greyiſh colour, mixed with little red ſtreaks. When this fruit is ripe, it opens ſpontaneouſly, and diſcovers a little ſtone as black as jet, caſting a very ſtrong ſmell offenſive to the head, ſo that it is gathered by intervals, thoſe employed in the work not being able to remain on the tree any conſiderable time. After it is gathered, it is expoſed to the ſun to be dried; but the ſtone or nut, being too hot and ſtrong, is thrown away, and only the huſk or bark preſerved; which, though not quite ſo agreeable as our pepper, is however is of good uſe in ſauces.

THE ſugar-cane grows plentifully enough in China, which is a kind of reed, about three fingers thick, full of knots, and delighting in marſhy grounds. It riſes to the height of ſix or ſeven feet, and is common in ſeveral parts of the Eaſt-Indies; but we reſerve a farther deſcription of this plant, with an account of it's culture and the preparation of ſugar, till we come to treat of America.

THE ſoil and climate of China is proper for all manner of fruits, ſo that they have pears, apples, apricots, peaches, figs, grapes of all kinds, and eſpecially excellent muſcadines. They have vaſt numbers of mulberry-trees, the leaves whereof are the proper food of ſilk-worms †; and, their climate being well ſuited to the nature of thoſe inſects, the quantity of ſilk produced in this country is

---

* See p. 20 of this volume.

† We have given a particular account of this curious inſect in Vol. I. under the animals of France.

incredible.

incredible. They have alſo pomegranates, walnuts, cheſnuts, and in general all the ſorts of fruits we have in Europe. Their olives have a fine taſte, though of a different kind from ours; but they preſs no oil out of them, perhaps becauſe they are not fit for that purpoſe. They have ſeveral kinds of melons, which are all excellent; particularly one about the bigneſs of a ſmall pear, of a ſweet taſte and yellowiſh colour, which they eat with the rind, as we do an apple. The others are very large and long, ſome of them white within, and others red, which are reckoned ſo fine and wholſome, that they may be eaten with ſafety in the hotteſt weather, and even in a fever.

BUT, beſides the fruits they have in common with us, there are others in China which are not known in Europe. The moſt delicious of theſe is called letchi, which is ſhaped like a muſcle-plum, and about the ſame bigneſs. It has a rough thin rind, incloſing a pulp of an exquiſite taſte, to which nothing we have in Europe is comparable; but it is not proper to eat much of it, being of ſo hot a nature as to cauſe the ſkin to break out in pimples. The Chineſe dry it, whereby it becomes black and wrinkled like our prunes, and ſo is preſerved and eaten all the year. It is alſo uſed in tea, to which it gives an agreeable acid.

THEY have another ſmall fruit called lenyen or dragon's eye, which grows on a large tree like our walnut, and has a ſmooth rind of a greyiſh colour, but grows yellowiſh as it ripens. This fruit has a pleaſant acid taſte, is very full of juice, and is reckoned an extraordinary cooler.

THE ſezee, another fruit peculiar to China, grows almoſt in all parts of it; and of this, as of apples, there are ſeveral kinds. Thoſe in the ſouthern provinces taſte much like ſugar, and

melt in one's mouth; but in the northern provinces they are larger and firmer, and more eafily preferved. The rind of the former is clear, fmooth, tranfparent, and of a fhining red colour, efpecially when the fruit is ripe. Some are fhaped like an egg, but ufually bigger; the feeds are black and flat, and the pulp is very watery and almoft liquid, fo that they fuck it all out at one end, leaving nothing but the fkin. When they are dried, like our figs*, they become mealy; and in time there grows a fugared cruft upon them, of a delicious flavour. The Chinefe do not much regard the cultivation of this fruit, the tree, growing naturally in almoft any foil; but, would they endeavour to bring it to perfection by grafting, it might probably be much improved.

We need not take notice of their pine-apples, goyaves, cocoas, and other fruits, of which we have already given fome account, and for which they are indebted to the Indies: But we ought not to forget their oranges, commonly known amongft us by the name of China oranges, the tree being originally brought from thence into Europe by the Portugueſe; but they brought only one kind over, though there are feveral in China. That

* Figs are dried either by a furnace or the fun; and in this condition they are uſed both as food and medicine, being the wholſomer and eaſier of digeſtion for being thus cleared of much of their aqueous and viſcid parts. The iſlands of the Archipelago yield figs in great abundance, but they are much inferior in goodneſs to thoſe of Italy, Spain, and Provence. The Greeks of thoſe iſlands cultivate them with wonderful care and attention, and by a peculiar art called caprification, of which we have given a particular account in Vol. III. under the article of the vegetables of Turkey in Aſia.

which

which is reckoned the greateſt rarity, and often ſent as ſuch to the Indies, is no bigger than a billiard-ball, the rind whereof is very ſmooth, clear, and of a reddiſh yellow. The larger ſort however are eſteemed the beſt, and are frequently given to ſick perſons roaſted, and ſtrewed with ſugar, which mixing with the juice makes an excellent ſyrup, ſaid to be very good for diſtempered lungs.

LEMONS, citrons, and what the Indians call pampelimonſes, are very common in China, and therefore not ſo much regarded as in Europe; but they cultivate with great care a particular ſpecies of lemon-tree, whoſe fruit is perfectly round, green, and not bigger than a walnut. They uſe this fruit in all their ragouts, and often plant the tree in boxes to adorn their courts and halls.

THERE is a remarkable kind of nut-tree growing in ſome parts of China, ſomewhat reſembling our ſycamore. The leaves are about eight or nine inches in diameter, and have a ſtalk a foot long. It bears very thick cluſters of flowers; and, about the end of July or the beginning of Auguſt, there ſpring out of the branches little bunches of leaves, whiter and ſofter, than the others, which are ſucceeded by ſmall nuts or berries, containing a white ſubſtance of an agreeable flavour.

WE have a ſtrange account of a ſort of weed growing under water, which the Chineſe call petſi, whoſe root (they ſay) is faſtened to a white matter covered with a red ſkin, which, when freſh, has the taſte of a hazle-nut, and which is affirmed to have the property of ſoftening copper, ſo as to render it eatable, if a piece of the metal be put into the mouth along with it: But experience has now refuted this ridiculous ſtory.

To conclude this article, we may obſerve in general, that no country in the world comes up to China for the abundance of roots and pulſe, which are the principal food of the inhabitants, who ſpare no pains to have them in perfection. Their care and dexterity herein is beyond that of our beſt gardeners; and, if our walks exceed theirs, they outdo us in their kitchen-gardens. They have ſeveral roots and plants intirely unknown to us, on which they ſet a great value; and amongſt the reſt they have a ſpecies of onions which may be looked upon as a great curioſity. Theſe onions do not ſeed like ours, but towards the latter end of the ſeaſon their leaves bear ſome filaments, in the midſt of which grows a white onion like that in the ground. This in time produces it's leaves, from whence proceeds another onion, and ſo on, the ſpace between them being leſs and leſs, the higher they are from the ſurface of the earth. The dimenſions are ſo juſt, and the proportions ſo exact, that one would think them made artificially; and it ſeems as if nature had a mind to ſhew us, that even in ſport, and deviating as it were from herſelf, ſhe can exceed the ſkill of the niceſt artiſt. — Thus much for vegetables, let us now proceed to the animal part of the creation.

ANIMALS.

BOTH China and Japan have moſt of the animals found in Europe, and in no leſs abundance. The Chineſe horſes are but of an ordinary ſize and ſtrength, but they are ſupplied from Tartary with thoſe that are more ſtrong and ſerviceable. The horſes of Japan are not large, but they are moſt of them handſome, and remarkable

able for their swiftness. They have also camels, mules, and other beasts of burden; and there are wild mules in China, which are fitter to eat than for any other use. These are of the same shape and size with ours in Europe, but of a lighter sorrel, and very fleet, so that few of them are killed but of the younger sort; and their flesh being sweet and tender is much admired, especially by the Tartars. They are traced by the earth they throw up to come at the roots on which they feed, are hunted with hounds, and supposed to propagate their species. One of the most remarkable animals of China is a kind of camel, no higher than an ordinary horse. He has two bunches on his back, covered with long hair, that form a kind of saddle. His legs are not so long in proportion as those of the common camel; and his neck, which is shorter and thicker, is covered with thick hair as long as that of the goat. Some of these camels are of a yellowish dun colour, others are a little upon the red, and in some places of an ash-colour; but as their legs are not very slender, like those of the camel, they seem, for their size, more fit to carry burdens.

THE sucotario is a Chinese animal, of a very singular shape, it being of the size of a large ox, with a snout like a hog, rough ears, and a thick bushy tail. The eyes are long, and placed upright in the head, quite contrary to those of other animals; and on the sides of the head, next to the eyes, are two long horns. It feeds upon herbage, and is seldom taken.

BUFFALOES are common in these countries, and they have a breed of sheep with very large tails, like those of Turky. Their mountains and forests abound with wild beasts of various kinds, as bears, boars, wolves, leopards, tygers, &c. which last are

ſaid to be very fierce and dangerous, as they commonly go in ſearch of their prey in large numbers. Elephants are chiefly bred in the province of Junnan, but are found in moſt other parts of the empire; and they are likewiſe bred up tame in the cities and towns of Japan. They have plenty of hares, deer, and other game, whoſe ſkins are a profitable commodity. Their hogs are black, and have deep bellies, reaching to the ground, like a breed that we ſee in England. They have great plenty of geeſe, ducks, and all manner of poultry; and their woods and mountains abound with eagles, cranes, pelicans, pheaſants, and many other birds well known in Europe, beſides ſeveral that are peculiar to thoſe Eaſtern countries. As to fiſh, their rivers, canals, and lakes are well ſtored with a vaſt variety; and in the fiſh-ponds of the curious there is a particular kind, called the gold and ſilver-fiſh, which merits a deſcription.

THIS beautiful animal is uſually about three or four inches long, and of a proportionable thickneſs. Mr. *Smith* obſerves, that ſome of theſe fiſhes were kept alive by Mr. *Margas* of London, in a China baſon that had a hollow piece of rock-work in the middle, with ſeveral holes in it, through which they delighted to paſs and repaſs. This gentleman had a dozen brought him by an Eaſt-India captain, which were all red, when in China, except two; but, when they came to England, changed into all manner of colours, ſome having ſpots of red, ſome red and gold, ſome white and purple, ſome ſilver and red, ſome yellow and red, and ſome gilded all over. The caſe is the ſame in China, where they are of various colours, but all of them extremely beautiful. They are, ſays our author, from two to fourteen inches long; and no one could ever diſtinguiſh the male from the female.

A Fishing Bird in CHINA call'd Louva
Vol. IV. Pa. 129.

female. Their tails are either quite flat, or else triangular. Mr. *Margas* kept them in Thames-water; and if it was muddy when the bason was filled, they would purify it, and render it as clear as pump-water in a quarter of an hour; so that it is probable they live upon the mud, and such animalcula as are found in all waters, even the purest. Sometimes he fed them with bread, but he thought they were better without it; several having died when he fed them, but none when he did not. Indeed these fish begin now to be known pretty well in England, gentlemen and ladies frequently keeping them in large glass vessels, in which they swim about, and may be observed at leisure, without the least inconvenience. The author of a System of Geography just published, says, "that they here multiply very fast, and that a per-"son of distinction, at Wimbleton in Surry, has "actually a fish-pond well stocked with them. "They are, however, he adds, very indifferent "food; for nature has bestowed so many beauties "on them, only to charm the eye; and has con-"sulted their safety, by rendering them incapable "of gratifying the taste of the luxurious."

THE Chinese have not only their golden fish, but also a bird called kinki or golden hen, so stiled for it's extraordinary beauty both of colour and shape, as well as it's excellent taste, being said to exceed the finest pheasants. It's feathers are of an exquisite blue and red, beautifully shaded towards the extremities of the wings and tail, and variegated with several other colours.

THE louwa or fishing-bird of China is a very great curiosity, if the accounts we have of it are to be believed. This bird is as big as our heron, but shaped more like a raven, is web-footed, and has a long crooked bill. The fishermen train up

theſe fowls to catch fiſh, and bring them to be as tractable and as much under command, as hawks or ſpaniels are to the ſportſmen in England. When they go to fiſh with them, either in the ſea or the rivers, they have them perched on the ſides of the boat, waiting for the word of command; which when the fiſherman gives, they take flight, and ſeparately look for their prey; and, when one of them has ſeized a fiſh, (after which they frequently dive) he brings it to his maſter in the boat, and then flies away again upon the ſame errand. As fiſh is the natural food of theſe birds, they need no teaching to catch them; but the difficulty lies in reſtraining them from devouring their prey, and to train them ſo as to bring it to their maſters. To this end they tie a ſtring about their necks, ſo ſlack as to ſuffer them to breathe, but ſo tight as to prevent their ſwallowing a fiſh, unleſs it be very ſmall; and, when they have taken fiſh enough to ſatisfy their maſter, he takes off the ſtring, and lets them work for their own bellies.

THE Chineſe quail is not above half the ſize of ours; it has a black bill, and the forepart of the head, breaſt, ſides, and inſides of the wings, are of a bluiſh aſh-colour: but the belly, thighs, and covert feathers beneath the tail, are of a dark reddiſh orange; and a line of a duſky white runs along the middle of the belly. The ſides of the breaſt are ſpotted with black; on the throat under the bill, is a black ſpot ſurrounded with white; and without that, a black line that joins to each corner of the mouth. The hinder part of the head and neck, with the back, wings, and covert feathers of the tail are brown. The wing feathers are irregularly barred with tranſverſe duſky lines; but the legs and feet are of a bright orange colour, like thoſe of the common quails. Theſe are brought

up

up tame by the Chineſe, who fight them in the ſame manner as we do cocks, and they lay great ſums of money on their heads.

In Japan are ſeveral ſorts of wild ducks which are ſo familiar as not to fly away at any one's approach. The male of one of theſe kinds is extremely beautiful, it's feathers being wonderfully diverſified with the fineſt colours imaginable. The neck and breaſt are red, and the head is crowned with a moſt magnificent topping: beſides the tail riſing obliquely, and the wings ſtanding up over the back, in a very ſingular manner, afford a ſight as various, as it is uncommon.

There are alſo pheaſants of ſingular beauty, particularly one kind, remarkable for the various colours and luſtre of it's feathers, and for the beauty of it's tail, which is about a yard long, and in the variety and mixture of the fineſt colours, chiefly blue, is not inferior to that of the peacock.

In China is a ſerpent as red as coral, the ſmall ſcales being of a bright red, marked with ſpots of a deeper colour. The head is of a bright yelloviſh red, and the ſcales of the belly of an aſh-coloured yellow, but they are not very common.

In the iſland of Hay-nan, on the coaſt of China, are ſerpents of a prodigious ſize, but ſo fearful, that they fly away at the leaſt noiſe. It is probable that no miſchief is to be apprehended from their bite, as the inhabitants, without the leaſt apprehenſion of danger, walk barefooted day and night, both in the woods and fields.

We are told of a ſtrange kind of ſerpent found in China, (but we ſhall not vouch for the truth of it,) which has no tail, but the two ends or extremities are both alike for ſize and ſhape, that is, each end is really a head, having eyes, ears, mouth, &c. But while one of theſe heads has the

uſe of all it's organs of ſeeing, taſting, and the like, the other is void of all thoſe ſenſes, the ears being ſtopped, the eye-lids over the eyes, and the lips cloſed together; ſo that the animal only takes in ſuſtenance by the mouth of the other head, and hears and ſees with the ears and eyes of the ſame, to avoid danger, and direct it's courſe. To add to the wonder, it is affirmed by a gentleman who kept one and made the obſervation, that theſe two heads live and die alternately every ſix months; at the end of which time the living head declines by degrees, and in the ſame proportion the organs of the other head begin to open, and to act and perform their proper offices of eating, ſeeing, hearing, and guiding the body; and thus each head in it's turn has the maintenance and direction of the whole.

THIS ſerpent is probably a ſpecies of the amphiſbena, or doubleheaded ſerpent, remarkable for moving with either the head or tail foremoſt, as the Greek name implies. This error, ſays Dr. Brookes, probably took it's riſe from the thickneſs of the tail, which might look at a diſtance, like another head.

THE relations of travellers furniſh us with accounts of other extraordinary ſerpents to be met with in China, but they ſavour too much of romance to be repeated. The ſilk-worm, which ſeems to be a native of that country, we have ſpoken of largely towards the beginning of our work; and as for the remarkable quadrupeds of China, ſuch as the elephant, rhinoceros, porcupine, &c. we refer the reader to our deſcription of them in the foregoing chapter, and proceed to another ſubject.

BUILDINGS,

BUILDINGS, CANALS, &c.

ONE of the greateſt curioſities of the artificial kind that China affords, and which may be reckoned one of the moſt aſtoniſhing remains of antiquity now in the world, is that prodigious wall which was built by the Chineſe to prevent the frequent incurſions of the Tartars. This wall *Du Halde* informs us, is higher and broader than the common walls of the cities of China, that is, about twenty-five feet in height, and broad enough for ſix horſemen to ride a-breaſt upon it; and it is fortified all along with ſtrong ſquare towers at proper diſtances, to the number of three thouſand, which in the time of the Chineſe monarchs, before the Tartars ſubdued the country, uſed to be guarded by a million of ſoldiers. The whole length of it, with all it's windings, is computed at near fifteen hundred miles, running all along the three northern provinces of Pekeli, Shanſi, and Shenſi, and built on ſome places which ſeem inacceſſible, as well as over rivers, and ſuch marſhes and ſandy hollows as one would think incapable of admitting a foundation for ſo weighty a ſtructure. It is chiefly built of brick, and ſo ſtrongly cemented with an extraordinary kind of mortar, that though it has now ſtood above 1900 years, expoſed to all winds and weathers, it is very little decayed, and the terraſs on the top ſeems ſtill as firm as ever. This amazing wall was built by the emperor *Chihohamt*, according to ſome authors, or *Tſinſhiwhang*, according to *Du Halde*, above two hundred years before the birth of our Saviour; and, though of ſuch ſtupendous length and bulk, and carried on over mountains and vallies, was compleated within the

ſpace

ſpace of five years, if we may credit the Chineſe tradition.

Le Compte obſerves, that this wall was one of the greateſt and maddeſt undertakings ever known; for, though it was prudent to guard the avenues, nothing could be more ridiculous than for them to carry their wall to the top of ſome precipices, which the birds can ſcarce reach with their wings, and which it is impoſſible the Tartarian horſe ſhould aſcend: For my part, ſays he, I admire how the materials were conveyed thither; this was not done without a vaſt expence, and the loſs of more men than could have periſhed in the greateſt fury of their enemies.

THE many long and deep canals which the Chineſe have made by dint of labour throughout moſt parts of the empire, either for the better watering of their grounds, or for the conveniency of conveying their merchandiſe from place to place, deſerve to be ranked among the rarities of the country. There is a large canal in almoſt every province, banked on each ſide with ſquare ſtone, and having it's keys, ſluices, and bridges, at convenient diſtances. The roads on the ſides of theſe canals are either paved, or made hard and ſound with gravel, and planted on each ſide with rows of ſhady trees. From theſe great canals, which are commonly ſtiled royal rivers, are cut ſeveral ſmaller, which are again branched out into rivulets, that generally end at ſome town or village. Sometimes they diſcharge themſelves into great lakes or ponds, out of which all the adjacent country is watered; ſo that theſe clear and plentiful ſtreams, embelliſhed with many fine bridges, bounded by ſuch neat and convenient banks, equally diſtributed into ſuch vaſt plains, covered with innumerable boats and barges, and crowned (as it were) with

a pro-

a prodigious number of towns and cities, whose ditches they fill, and whose streets they form, at once render China one of the most fruitful and most beautiful countries in the world.

To these may be added a whimsical kind of artificial curiosity peculiar to China, which, though of no use but to please the sight, could not be made without immense labour and expence. These are some of their mountains, which they have cut and formed into various shapes, so as to resemble horses, birds, &c. What the Chinese say of their structure, is so filled with fables and ridiculous stories, that no regard is to be given to it; and these odd figures, though of such prodigious bulk, plainly appear to be the work of art and labour, and neither owing to miracles nor magic, as the Chinese would have us believe. Those commonly called the mountains of the five horses heads are the most wonderful of all, and could not be fabricated into such shapes without a vast number of hands and inconceivable labour.

SOME cities of China, particularly Pekin and Nankin, have been famous for the largeness of their bells, there being seven in Pekin, according to father *Le Compte*, each of which weighs 120,000 pounds; but to us this appears quite incredible, as we have already intimated, in speaking of the great bell of Erfurt in Germany.

THE monstrous colossus * at Meaco, once the capital

* This is a name given to any statute of an enormous or gigantic size. The most eminent of this kind was the colossus of Rhodes, which was a brazen statue of Apollo, the height whereof was seventy cubits, or one hundred and five feet, and every part proportionable, the thumb being so big that few men could grasp it with their arms, and every finger of the size

capital city of Japan, is reckoned among the rarities of that country, and is therefore proper to be mentioned. It is one of their principal idols or deities, is all of gilt copper, and is seated in a chair seventy feet high. No less than fifteen men, they say, can stand conveniently on it's head; and, it's other parts being proportionable, one may from thence form a judgment of it's enormous bulk. — The Japanese indeed, as well as the Chinese, are so addicted to idolatrous worship, that every place swarms with idols; they have them not only in their temples, but in other public and private buildings, and even in their highways, streets, and markets. There is particularly in the great metropolis above mentioned, a temple that may be looked upon as a Japanese pantheon, hav-

---

size of an ordinary statue. One of it's feet stood on one side of the mouth of the harbour, and the other on the opposite side, so that ships under sail passed between it's legs. It was the work of *Chares*, a disciple of Lysippus, who spent twelve years in making it; and, after it had stood above 1300 years, it was thrown down by an earthquake. When the Saracens made themselves masters of Rhodes, the statue was found upon the ground broken and demolished, and was sold to a Jew, who loaded nine hundred camels with the metal; which therefore, allowing eight hundred weight to each load, (besides the diminution we may suppose it had suffered by rust and theft in a long course of time) amounted to 720,000 pounds weight, or three hundred and sixty tons; a prodigious quantity of brass to be employed in forming one single statue! — Some of the moderns have doubted whether there ever was such a statue at Rhodes as the colossus above described, and indeed the extravagant dimensions ascribed to it would tempt one to doubt the truth of the relation: But, being mentioned by so many writers of reputation, it is more than probable that there was at Rhodes an image of a prodigious size, dedicated to the sun; though the hyperbolical or figurative expressions, used by some writers concerning it, may have given occasion to others to magnify it's dimensions considerably beyond the truth.

ing

ing no leſs than three thouſand three hundred and thirty-three idols within it's walls.

IT may be ſaid in general of the cities of China, that they are built with great uniformity and regularity, eſpecially where the ground will permit it; moſt of them being either of a perfect or an oblong ſquare, and the ſtreets being ſtraight, and interſecting each other at right angles. Some are of a round figure, others of an oval, but all built with the ſame uniform ſymmetry, and ſurrounded with high walls and turrets. As for the houſes and other buildings, eſpecially the public ones, they commonly wear the beſt ſide outwards, and, notwithſtanding the oddneſs of their taſte, appear beautiful enough; but the furniture of the inſide is not extraordinary, if we except their fine cabinets, ſcreens, and ſuch-like ornaments, with their China jars, and other pieces of that manufacture. The cuſtom of the country indeed renders ſumptuous furniture unneceſſary, for it is not uſual to admit either ſtrangers or friends into the inner part of their houſes, but to entertain them in a kind of ſeparate apartment, built ſomething like our ſummer-houſes, which are very neat and convenient, and more or leſs adorned according to the quality of the owner, but cannot be called ſtately or magnificent, the roofs being only ſupported by wooden columns, and generally without a cieling. Their beds, which are the fineſt part of their furniture, have embroidered curtains of taffaty in ſummer, or ſome very thin ſilk, which ſerve to keep off the flies and gnats, but admit a free paſſage for the air; and in winter they have them of coarſe ſattin, with ſome kind of embroidery. They have no tapeſtry, but there is one ſort of ornament they are very fond of, viz. pieces of white ſilk hanging on the walls or wainſcot of their apartments, on which

which are written in a large character ſome moral ſentences, taken out of the writings of their celebrated philoſophers. Theſe ſhort ſentences are in ſuch eſteem amongſt them, that they frequently have them on their fans, ſcreens, pictures, cabinets, and even upon their veſſels of porcelane. They have no chimneys in their rooms, but make uſe of ſtoves of charcoal to warm them in cold weather.

THE Japaneſe affect great neatneſs in their buildings. Their houſes are moſtly of wood, though ſome of the better ſort have a ſtone foundation; and they are but one ſtory high (like thoſe of China) on account of the frequent hurricanes and earthquakes to which the country is ſubject. Theſe wooden buildings make their cities very liable to fires, which often make great devaſtations amongſt them; but many people have an apartment of ſtone, ſeparate from their houſes, wherein they ſecure their moſt valuable effects, when they are threatened by ſuch diſaſters. Their floors are covered with mats, which are always kept very clean; inſtead of which the richer ſort of people uſe ſilk ſtuffs, embroidered velvet, and cloth of gold. Their rooms are generally wainſcotted, and either curiouſly painted after their manner, or hung with pictures and painted paper neatly put together. The ground apartments are ſeparated from each other by partitions that are gilt and painted, and can be folded and removed like ſcreens; ſo that five or ſix of them may be eaſily thrown into one, as is uſual at their grand entertainments, or according as the buſineſs and company require. The chief furniture of the houſes of the nobility is likewiſe rather elegant than ſumptuous, conſiſting of cabinets, ſcreens, beds, &c. of the beſt ſort, but they do not affect a ſhew of plate,

plate, jewels, and other coſtly ornaments. Porcelane veſſels, which the Japaneſe make very large and exquiſitely fine, are the chief embelliſhments of their rooms, excepting curious ſcymetars, and other kinds of armory. What appears moſt ſplendid are the cielings of their halls, ſtaircaſes, and ſummer-houſes, which are commonly of fine cedar, and beautifully gilt and painted. Before their houſes they have uſually a ſpacious court, with an aſcent of three or four ſteps, and a like deſcent behind, which leads into the gardens.

THIS account may ſuffice for the buildings of China and Japan in general, but ſome of their palaces, temples, and other ſtructures require a more particular deſcription. The imperial palace at Pekin in China is one of the greateſt curioſities in the whole empire. It is an oblong ſquare, about two miles in length and one in breadth, ſurrounded by two ſtout walls, the outermoſt whereof is of a vaſt height and thickneſs, and covered within and without with a red kind of cement, and on the top with ranges of brick of a beautiful yellow. Each end has a magnificent gate, or more properly three gates, the middlemoſt of which is only opened for the emperor, but the other two are open for all comers and goers from morning till night. In the interval between the two walls are the apartments of the nobles and great officers of ſtate, and of a great number of artificers conſtantly employed by the emperor; beſides the courts of judicature, and divers other offices and lodgings, all of them very large and ſtately. The innermoſt wall is ſurrounded by a deep ditch lined with ſtone, having draw-bridges over it at the ſeveral gates, which are only opened to the

the mandarins or lords in waiting, and to such as bring a ticket from them specifying their business. Within this inclosure stands the imperial palace properly so called, with it's gardens, baths, pleasure-houses, and whatever is magnificent and delightful, particularly an artificial lake well stored with fish, where the court sometimes take the diversion of fishing in their barges. There are nine large courts or squares within this wall, all which are surrounded with stately buildings, and we pass through lofty arches from one court to another, each rising higher than the former. In the inner court of all, which is the noblest and highest, are the apartments of the emperor, and a grand seraglio of fine women, one of whom bears the title of empress, and the rest are his concubines, or ladies and maids of honour. There is also a great number of women who have the management of the kitchen, cellar, &c. so that it is computed the whole number of the fair sex attending the imperial court amounts to above five thousand, not to mention the eunuchs, who are likewise very numerous. This innermost quadrangle is ascended by a flight of six steps on all sides, and surrounded with a noble balustrade, adorned with lions, dragons, and other embellishments. The buildings of this square are all stately and beautiful, but that which is the residence of the emperor far surpasses the rest in splendor and magnificence. The fine porticoes supported by marble pillars, the glazed tiling, the curious carvings, gildings, and paintings, with which the apartments are adorned, the richness of the furniture, and the various pieces of architecture that make up the whole palace, all together have a surprising effect, and look every way becoming the majesty of so great a monarch.

THE

THE palace of the Japaneſe emperor at Jedo or Yedo, the capital of his dominions, is not leſs magnificent and ſpacious than that of the emperor of China. It is ſurrounded by three high walls and as many deep ditches, with large intervals between each; and the water is conveyed from one ditch to another by ſubterranean pipes, ſo that they are always equally full. Theſe walls have eight or nine ſtately gates oppoſite to each other, and between every two gates there is firſt a level piece of ground, and then an aſcent by ſteps into certain out-works, with another area beyond them, where a thouſand men may be drawn up on any emergency; ſo that the avenues to the imperial apartments are ſufficiently ſecured. In the ſpace between the firſt and ſecond wall live the petty kings, princes, the chief nobility, and governors of the provinces, in ſtately edifices, according to their rank and office; and the ornaments and furniture within are anſwerable to their external appearance, it being eſteemed a mark of reſpect to their monarch to ſtrive to out-do one another in the riches and ſplendor of their houſes and furniture. Between the ſecond and third wall live the emperor's relations and principal counſellors, each in ſeparate apartments, or rather palaces, extremely grand and beautiful. In the center of all, within the third incloſure, are the imperial apartments, conſiſting of a great number of ſpacious halls, lodgings, offices, &c. for the emperor, his wives, and attendants, all of them richly furniſhed. Theſe apartments are three rows of buildings, nine ſtories high, and formed on the top like pyramids, which are crowned with large gilded dolphins. The cielings of the halls and chambers are plated with gold and ſilver, curiouſly raiſed and worked, and inriched with variety of precious ſtones. The hangings

hangings are of the richeſt ſilk, flowered with ſilver and gold, pearl, and other embelliſhments. In the hall of audience, where the emperor receives homage or ambaſſadors, there is a throne of maſſy gold beſet with large gems of ineſtimable value. The roof, which is lofty, is alſo plated with gold, richly enamelled with curious figures and landſkips, and ſupported by ſtately gilded columns. The gardens behind the apartments are laid out in an elegant taſte, and are moſt agreeably diverſified and adorned with terraſſes, canals, fiſh-ponds, water-works, and other ornaments. Nor ſhould we forget to mention the noble theatre in the area before this inner court, where plays are frequently acted for the diverſion of the imperial family.—Upon the whole, this amaſing palace, or rather aſſemblage of palaces, which is five or ſix miles in circumference, looks like a populous and opulent city within itſelf, being inhabited by princes and nobles, and by the eldeſt ſons of all the great men of the empire, who are educated there, and kept as pledges of their fathers fidelity. All theſe contribute to form a moſt ſplendid court, their dreſs, equipages, &c. being extremely beautiful and ſumptuous.

To theſe we might add ſeveral other ſtately palaces both in China and Japan, but of all the public buildings of thoſe countries none are ſo magnificent and extravagantly adorned as many of their temples, which are lofty ſtructures, filled with an incredible number of idols, before which hang lamps that are continually burning. The Chineſe reckon near five hundred of theſe temples of the firſt rank, beſides a prodigious number of others of leſſer note, which are to be found in every town and village, and which are ſerved by about

about 350,000 bonzes or prieſts*, who offer rice, wine, and other proviſions to their deities, and have generally large revenues for their ſubſiſtence. Near theſe temples are frequently cloyſters or monaſteries of thoſe who have devoted themſelves to religion, who undergo ſuch voluntary penances as they think will be moſt acceptable to their gods, living abſtemious lives, and bearing their mortification with the utmoſt reſolution.

THE temples in Pekin are large and numerous, covered with ſhining tiles, which dazzle the eye of the ſpectator; and, beſides thoſe in the city, there is a multitude of other fine ones in the country round about it, which afford a noble proſpect. Amongſt the reſt there is one of a pyramidical form, built upon the ſummit of a mountain formed by art, which is ſo rough and craggy

* Theſe are the prieſts of the moſt numerous ſect of idolaters in China, who worſhip the idol Fo, whom they call the only god of the world, and who is ſaid to have been brought from India about thirty years after the death of our Saviour. They teach ſeveral moral precepts, and that there is a future ſtate of rewards and puniſhments. Their ſanctity is reckoned very great, and their voluntary penances of ſuch value, that they are thought ſufficient to atone for the ſins of the people. —Another conſiderable ſect are the followers of *Li Laokum*, who lived, they ſay, above five hundred years before *Chriſt*. He taught that God was corporeal, and had many ſubordinate deities under his government. — A third ſect is that of the learned, or the diſciples of the celebrated *Confucius*, who delivered excellent precepts of morality, and inſtructed the people in philoſophy. He ſpeaks of God as a moſt pure and perfect principle, the fountain and eſſence of all beings; and, though we are told he prohibited idolatry, he has temples and images erected to him, and is worſhipped with the moſt profound adoration.—Theſe are the three principle ſects among the Chineſe, who, beſides their numerous images, alſo worſhip the ſun, moon, and other planets, the ſouls of their anceſtors, and of thoſe who have been the authors of any notable invention.

that

that it looks quite frightful; and near the temple is a lofty tower, of a circular form, ten ſtories high, round the uppermoſt whereof hang fifty bells, which are ſo eaſily moved by every breath of wind, that they keep a continual tinkling, and are heard at a great diſtance.

THE temple of the Sun, which ſtands about half a mile from the eaſtern gate of Pekin, is a vaſt pile of buildings, ſurrounded with a wall near a mile in circumference, within which are ſeveral large apartments, and in the midſt of them a ſpacious and lofty hall, whoſe roof is ſuſtained by fourſcore ſtately columns, adorned with gold and azure. Hither the emperor repairs at the time of the winter-ſolſtice, and offers ſacrifices of oxen, ſheep, goats, &c. to the Sun, the whole ceremony being performed with the greateſt appearance of humility and devotion.

PERHAPS it will be no diſagreeable digreſſion, if we mention another ceremony performed by the Chineſe emperors at the temple of the Earth, which is ſituated on the weſt ſide of Pekin, about the ſame diſtance from the walls with that of the Sun. As ſoon as a new emperor is crowned, he is conducted to this temple, where he puts on the habit of a ploughman, and goes to a ſpot of arable ground within the incloſure of the building, where he finds a plough gilt and varniſhed, and two oxen with gilt horns yoked to it; and, taking the plough in his hand, he holds it the length of two or three furrows, with the aſſiſtance, we imagine, of ſome perſon better ſkilled in the buſineſs. Whilſt he is about this ruſtic employment, his conſort, accompanied by her ladies, comes and prepares him ſome homely diſh, which they bring to him in ordinary veſſels, and all ſit down and eat together. This is an ancient cuſtom among the Chineſe originally

ginally designed to put their new monarch in mind, that his revenue was owing to the sweat and labour of his subjects, for which reason he ought to avoid all superfluous expences, and ease them of all needless burdens.

At Meaco, formerly the capital of Japan, there is the most magnificent and sumptuous temple in the whole empire. It is as long and as high as St. Paul's church in London, the dome excepted, and is all built of free-stone. It has an arched roof, supported by a great number of pillars; and has a vast many altars and idols in it, particularly that gigantic one of gilt copper already described. This temple stands upon the top of a hill, and on each side of the ascent there are fifty stone pillars, ten paces distant from one another; on the tops of these are so many large lanthorns or lamps, which being lighted in the night-time make a pretty appearance.

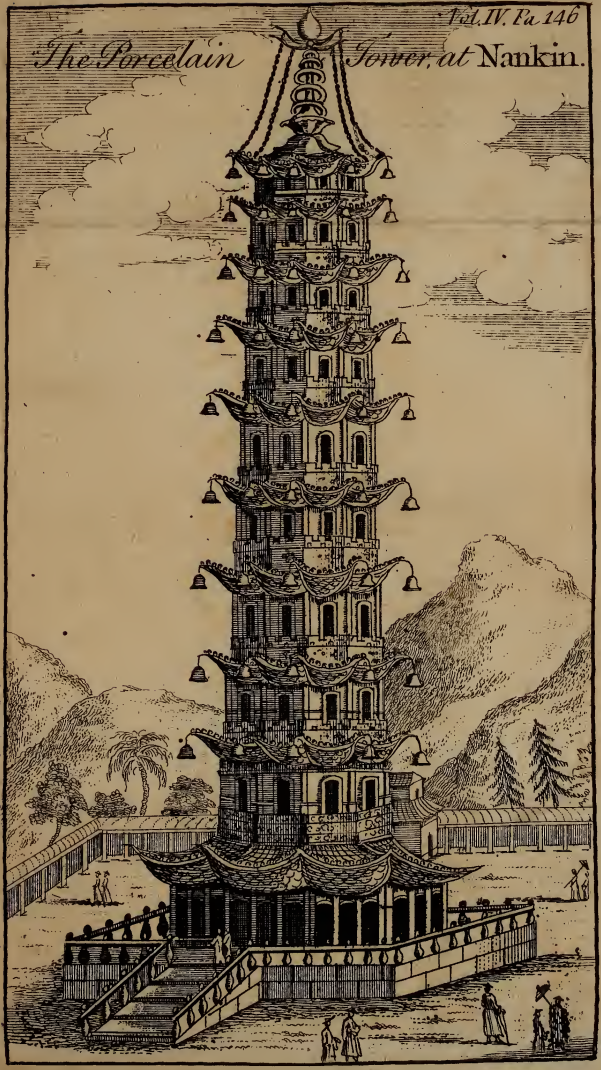
The temples at Jedo, the present metropolis of Japan, are very numerous and splendid, particularly that of Amida, one of their principal deities, which is almost covered with gold. The statue of that deity is on horseback, placed on a magnificent altar, covered with plate of the same metal; and the housings of the horse are richly embroidered with it, and enriched with pearls, diamonds, and other gems of immense value. Nothing can be more ugly and frightful than the figure in which he is represented; and indeed many other idols of these Eastern nations are formed in the most monstrous shapes imaginable.

Without the gates of several great cities in China there are lofty towers erected, which seem chiefly designed for ornament, and for taking a view of the adjacent country. The most remarkable of these towers is that of Nankin, called

the porcelane tower, it being covered from top to bottom with porcelane tiles, beautifully painted. It is of an octangular figure, contains nine ſtories, and is about two hundred feet high, being raiſed on a very ſolid baſe of brick-work. The wall at the bottom is at leaſt twelve feet thick, and the building leſſens all the way to the top, which is terminated by a ſort of ſpire or pyramid, having a large golden ball or pine-apple on it's ſummit. It it ſurrounded by a baluſtrade of rough marble, and has an aſcent of twelve ſteps to the firſt floor, from whence one may aſcend to the ninth ſtory by very narrow and incommodious ſtairs, each ſtep being ten inches deep. Between every ſtory there is a kind of penthouſe or ſhed on the outſide of the tower, at each corner whereof are hung little bells, which being moved by the wind make a pleaſant jingling. Each ſtory is formed by large pieces of timber, and boards laid acroſs them; the cielings of the rooms are adorned with paintings, and the light is admitted through windows made of grates or lattices of wire. There are likewiſe abundance of niches in the wall, filled with images of their deities; and the variety of ornaments that embelliſh the whole, make it perhaps the moſt beautiful ſtructure in the empire. It has now ſtood above three hundred years, and yet appears very little decayed.

To theſe we may add another kind of ſtructures very common in the great cities of China, ſome of which appear noble and beautiful, viz. their triumphal arches, erected in memory of their great princes, lawgivers, philoſophers, and ſuch other perſons as have either done ſome ſignal ſervices to the ſtate, or have been diſtinguiſhed by their ſingular piety, learning, valour, or other accompliſhments. Theſe ſtructures uſually conſiſt of three arches

The Porcelain Tower at Nankin.



arches, built of freeſtone or marble, of which the middle arch is the higheſt. They are ſupported by pillars, ſometimes round, but oftener ſquare, of one intire ſtone, placed on an irregular baſis; and they are adorned with the figures of men, beaſts, birds, and other ſculptures, after the Chineſe manner, together with inſcriptions and panegyrics on the perſons to whom they were erected. Many of theſe arches are lofty and grand, but ſome are ſo very indifferent that they deſerve no notice. They reckon in the whole empire above three thouſand ſix hundred illuſtrious worthies, and about two hundred women, who are celebrated for their chaſtity or other virtues, both in the Chineſe books, and on theſe triumphal arches.

BEFORE we leave this ſubject, we ought to mention ſome of the bridges of China, which may be looked upon as wonderful pieces of art, ſcarce to be paralleled by any thing of the kind in Europe. The moſt ſurpriſing of theſe ſtructures is that which has obtained the name of the flying bridge, it being built over a river from one mountain to another, and conſiſting only of one ſingle arch, five hundred cubits high, and four hundred long—There is another remarkable bridge in the province of Shanſi, at the conflux of two large rivers, which is built upon a hundred and thirty barges chained together, but ſo contrived as to open and admit veſſels to paſs through, after paying the uſual toll. This ſort of bridges is common in China; but they have another ſort built upon pillars without any arches, and ſome of theſe of a great length and breadth, particularly one in the province of Fokien, which is three hundred and ſixty perches long, and one and a half broad. It is all of white ſtone, ſupported

by three hundred pillars; has a parapet on each ſide, and is adorned with the figures of lions at certain diſtances, and variety of other ſculptures. —Some of their arched bridges are likewiſe of conſiderable length, breadth, and beauty, eſpecially that of Fuchew, the capital of Fokien, which is above a hundred and fifty perches long, and conſiſts of a hundred lofty arches. The parapets of this bridge are alſo adorned with the figures of lions and other animals.

ARTS, MANUFACTURES, &c.

THE principal manufacture of China is that of ſilk, which employs a vaſt number of people, and is to that empire what the woollen manufacture is to Great Britain. The beſt and fineſt ſilk is produced in the province of Chekiang, and in ſuch vaſt quantities, that this ſingle province is able to ſupply all China, and the greateſt part of Europe. It is chiefly manufactured however in the province of Nankin, where the beſt workmen reſide, though the ſilks of Canton are valued by foreigners above all others. The ſort of ſilk moſt common among the Chineſe is that called touanze, which is like our ſattin, and is plain or wrought with flowers, birds, trees, and houſes. Theſe figures are not raiſed upon the ground by a mixture of raw ſilk, as is practiſed in Europe, which makes our work not ſo durable; but the ſilk is twiſted, and the flowers are diſtinguiſhed only by the different ſhades and colours. When they mix gold or ſilver with it, it reſembles our brocades or flowered ſilks, but their gold and ſilver thread is wrought in a manner peculiar to themſelves, the ſilk being ſpun and covered with little ſcrolls of paper gilt or ſilvered over, and not with

with flatted wire, as is the practice of our European artists. In summer they wear a kind of silk not so close as our taffaty, nor with so good a gloss, but more substantial; it is sometimes plain, and sometimes powdered with large flowers, pierced through and cut like English lace. Besides this they have another sort of taffaty, which is a very close silk, and yet so very pliant, that it does not wrinkle by pressing or tumbling, and bears washing like linen, without losing much of it's beauty. They make various kinds of silks, besides their gold tissues; and also velvet, plush, crapes, druggets, serges, and tammies: But, though wool is very plentiful, especially in the provinces of Shensi and Shansi, which abound with sheep, yet they make very little cloth; so that our English cloth is much esteemed amongst them, and sells dearer than their richest silks. They make blankets of their own wool, and a sort of russet cloth, of which their students have gowns for the winter.

THE Chinese likewise manufacture a great deal of cotton, and make a kind of linen of a plant called co, found only in the province of Fokien. It is a sort of creeping shrub, (probably a species of cotton) whose leaves are round, smooth, and green within, but whitish and downy on the outside. Some of the stems grow as thick as one's finger, which are pliable, and downy like the leaves. When it is gathered, bundles of it are put into water, as we do hemp; and, the outer skin being peeled off and thrown away, they divide the inner, which is much more fine and delicate, into very slender filaments, which are manufactured into a sort of linen, remarkable for it's lightness and coolness; and accordingly people of fashion wear vests of it in summer.

JAPAN, as well as China, abounds with the fineſt ſilk, of which the greateſt part is manufactured by the natives. The Japaneſe temper their ſteel to ſuch perfection, that they are remarkable for making the beſt of ſcymetars, and ſteel blades of all ſorts, far exceeding thoſe that are wrought in China. They are particularly famous for their beautiful cabinets, and for their fine varniſh and lacquer, which is ſo valuable, that a quantity of the beſt ſort made in Japan will ſell for twenty times as much as an equal quantity of that which is made in Europe. The varniſh (according to the account given us in the Philoſophical Tranſactions) is made of turpentine mixed with a curious ſort of oil, and boiled to a proper conſiſtence. The lacquer or lac is the juice of a certain tree drawn from it by inciſion, and catched in pots faſtened to the tree for that purpoſe. At it's firſt coming out it is of the colour and conſiſtence of cream, but, being expoſed to the air, the upper part of it ſoon turns black; and, to make it all black and fit for uſe, they put a quantity of it into a bowl, and ſtir it about with a piece of ſmooth iron for twenty or thirty hours, whereby it becomes black and thickens. With this they mix a quantity of very fine aſhes of burnt boughs, and, having ſtirred it well together, they lay it ſmooth with a bruſh on the wood they intend to lacquer. Then letting it dry in the ſun, it becomes harder than the wood itſelf; after which it is rubbed with a ſmooth ſtone and water till it be as ſmooth as glaſs, and then they lay on the varniſh. If they would have red or any other colour inſtead of black, they mix the colour in fine powder with the varniſh; and the ſmoother it is laid on, the more beautiful it appears. When they paint or japan (as we call it) in gold or ſilver, &c. they draw with a fine pencil,

pencil, dipped in the varniſh, the flowers, birds, or other figures; and, when it begins to dry, they lay on the leaf gold or ſilver, and ſometimes pin-duſt, which being rubbed when thoroughly dry, the figures remain as drawn with the varniſh, and the reſt is a bright black ground.—This lacquer is very pernicious to the hands and face, and ſometimes cauſes ſwellings and lameneſs, having an effect upon the japaners in ſome reſpects like that which the compoſition of white lead and other ingredients has upon our painters.

WE have heretofore deſcribed the European method of making paper of linen rags, and taken notice of the various opinions of authors concerning the origin of that invention*; but, the materials of the Chineſe paper, and the way of preparing them, being different from ours in Europe, it is neceſſary to give an account of this amongſt other curious manufactures of that country. The Chineſe paper, it muſt be obſerved, is of divers kinds; ſome made of the rinds or barks of trees abounding in ſap, as the mulberry-tree and elm, but chiefly of the bamboo and cotton-tree. In reality, almoſt every province has it's ſeveral paper; that of Sechwen is made of hemp, that of Chekiang of wheat or rice ſtraw, that of Kyang-nan of the ſkin found in the balls of ſilk-worms, that of Fokien of ſoft bamboo, and the bark of the mulberry-tree furniſhes the paper uſed in the northern provinces†.

* See Vol. II. p. 227, &c.

† Not only the bark, but the leaves of ſeveral trees and plants have been uſed as paper, and ſtill continue to be ſo in ſome parts of the world. In Ceylon, for inſtance, they write on the leaves of the talipot; and the bramin manuſcripts ſent to Oxford

As to papers made of the bark of trees, the manner of their preparation may be exemplified by that of the bamboo, a tree of the cane, or reed kind, but much larger, ſmoother, harder, and ſtronger than any other ſpecies. The ſecond coat or ſkin of the bark, which is white and ſoft, is what is commonly uſed for paper. This they beat in fair water to a pulp, which they take up in very large moulds or frames, ſo that they have ſheets ten or twelve feet long, and ſome-

---

Oxford from fort St. George are written on leaves of the ampana or palma Malabarica. We are alſo told by *Hermannus* of a large Malabar palm-tree, with plicated leaves almoſt round, and twenty feet broad, which the natives uſe to cover their houſes, and likewiſe to write upon, making the characters through the outer cuticle. In the Maldive iſlands they write on the leaves of a tree which are above two yards long, and a foot broad; and in ſeveral parts of the Eaſt-Indies the leaves of the muſa arbor, or plantain-tree dried in the ſun, ſerved for the ſame purpoſe, till they became acquainted with the uſe of European paper. In fine Mr. *Ray* mentions divers kinds of Indian and American trees that afford paper, particularly one called xagua, whoſe leaves are ſo large and of ſo cloſe a texture, that they will cover a man from head to foot, and ſhelter him from rain like a cloak. From the innermoſt ſubſtance of theſe leaves a paper is taken, being a fine white membrane, as large as a ſkin of our parchment or vellum, and not inferior in beauty and goodneſs to the beſt of our papers. — As to the bark or innerrind of trees, on which the ancients wrote, ſeveral ſuch manuſcripts are ſaid to be ſtill extant, particularly one in the abbey of St. Germain's, which in many places is not legible, the upper ſurface of the bark, on which the letters were drawn, being peeled off, though the under part remains intire. But, after all that *Mabillon* and *Montfaucon* have ſaid concerning the bark manuſcripts of the ancients, the learned count *Maeffi* attacks the whole ſyſtem as erroneous, and maintains that the diſtinction between the paper made of the papyrus in Egypt, and of the liber or bark of trees in other countries, is without foundation.

times

times more. They are compleated by dipping them sheet by sheet in alum-water, which serves instead of the size we make use of, and not only hinders the paper from imbibing the ink, but gives it a lustre that makes it look as if it were silvered, or at least varnished over. This sort of paper is white, soft, close, and without the least roughness; though, being made of the bark of a tree, it cracks sooner than European paper. Add to this, that it is more apt to take moisture, that the dust sticks to it, and that it is more liable to worms; to prevent which last inconveniency, the Chinese often beat their books, and expose them to the sun. It's thinness likewise makes it not so durable, so that they are under a frequent necessity of renewing their books by fresh impressions.

THE paper of the bamboo, however, is not the best that is made in China, that of the cotton-shrub being the whitest and finest, and least subject to the inconveniencies above-mentioned. But the paper most commonly used in China is made of the tree called chuku or kuchu, which *Du Halde* compares first to a mulberry-tree, then to a fig-tree, then to a sycamore, &c. so that from his description we know as little of it as if he had said nothing about it. The greenish outside of this tree being first scraped away, the inner rind is taken off in long thin slips, which are blanched in water exposed to the sun, and then prepared and made into paper in the same manner as the bamboo.

HERE it is to be observed, that the bamboo and the cotton-shrub have this peculiarity, that not only their inner bark, but their whole substance may be employed, being prepared in the following manner: Out of a wood of the largest bamboos they select shoots of a year's growth,

which are as thick as the calf of a man's leg; and these, being stripped of their outside rind, are split into straight pieces six or seven feet long, and steeped in a pond of muddy water, till they grow soft and rot by the maceration. They are then taken out, washed in clean water, spread in a large dry ditch, and there covered with lime for a few days. After this they are washed a second time, then separated in filaments, which are exposed to the sun to dry and whiten, then thrown into large coppers, where they are thoroughly boiled, and afterwards reduced to a thin paste or pulp by the strokes of weighty hammers. With this pulp they mix an unctuous sort of juice, extracted from the shoots of a plant called koteng, care being taken not to put in too much or too little, on which the goodness of the paper very much depends. Having beaten this mixture well together, till it resembles a thick clammy water, they pour it into a large reservoir, with low walls round it, and so cemented on the sides and at bottom, as not to be penetrated by the liquor. This being done, the workmen standing at the sides of the reservoir dip in their moulds, and take up the surface of the liquor, which instantly becomes paper, the mucilaginous juice of the koting binding the parts, and rendering it compact, soft, and glossy. To make sheets of an extraordinary size, they have large moulds sustained by strings, and lowered and raised by pullies, some of the workmen being employed to let down and pull up the frame, and others to take off the sheets, each doing his office with great regularity and expedition. — In order to harden the sheets, and make them bear ink, they undergo the following operation called saning, from the Chinese word san, which signifies alum. Six

ounces

ounces of fish-glue being cut small and steeped in water, it is afterwards boiled and stirred all the time to prevent lumps; and, the whole being reduced to a thin liquid substance, they melt and incorporate with it three quarters of a pound of calcined alum. Then this mixture is put into a wide bason, and, each sheet being drawn nimbly through it by means of a stick they use for that purpose, the paper is hung up to dry; for which end they have a hollow wall, whose sides are well whitened, through which it receives the heat of a neighbouring furnace; and by the help of this sort of stove the sheets are dried in a very little time.

THIS account of the Chinese paper leads us to describe their ink, which is an admirable composition, in vain attempted to be imitated in Europe. The Chinese or Indian ink (as we commonly call it) is not fluid as ours is, but solid, like our mineral colours, though much lighter. It is made of lamp-black of several kinds, but the best is that obtained by burning hog's-grease; and with the black they mix a sort of oil to make it the smoother, adding some odorous ingredients to take away the rankness of the smell. When it it mixed into a paste of a proper consistence, they form it in moulds into little oblong sticks or cakes, about a quarter of an inch thick, and adorned with the figures of dragons, birds, flowers, &c. which are curiously cut in the wooden moulds. To use this ink they have a piece of polished marble, made hollow so as to contain a little water, in which the stick of ink is rubbed till the water becomes of a sufficient blackness. Thus they presently have a fine ink, exceeding black, and of such a nature that it never runs or spreads farther than the pencil, so that the letters are always

ſmooth and evenly terminated. It is of great uſe in deſigning, becauſe the colour may be weakened or heightened at pleaſure.

THE Chineſe have a pretty method of ſilvering paper (if we may call it ſo) at a ſmall expence, and without uſing any ſilver. In order to this, they take two ſcruples of a ſize or glue made of leather, one of alum, and half a pint of clean water. Theſe they ſimmer over a gentle fire till the water is conſumed, that is, till no more ſteam ariſes; and with a pencil they ſpread two or three layers of this glue over the ſheets of paper laid ſmooth upon a table. Then through a fine ſieve they ſift over the paper a powder made of talc and alum, which having been boiled in water is dried in the ſun and pounded; and, this being ſpread uniformly on the ſheets, they hang them in the ſhade to dry; after which they are laid again on the table, and rubbed gently with clean cotton, to take off the ſuperfluous powder, which ſerves a ſecond time for the ſame purpoſe.

THERE remains ſtill to be deſcribed that noble manufacture of porcelane or China ware, which was a long time a myſtery in Europe*, in ſpite of

* We were formerly ſo little acquainted with the compoſition of porcelane, that ſome of the moſt learned men in Europe, namely *Scaliger* and *Cardan*, were ſo egregiouſly miſtaken, as to think it was made of eggs and ſea-ſhells beaten together, and buried under ground for eighty or a hundred years; but the account we are going to give will put that matter out of all queſtion. As to the inventor of porcelane, the Chineſe annals are intirely ſilent on that head; nor do we know much more of the time of it's invention, only that it appears from the ſaid annals to have been before the beginning of the fifth century. But this ſort of ware is of greater antiquity according to *Cardan* and *Scaliger*, who both agree that the vaſa murrina of the Romans, which were firſt ſeen at Rome in Pompey's triumph, and afterwards became ſo highly valued, were the ſame with the porcelane of our times.

all

all the endeavours of the Jesuit missionaries to penetrate into the secret. The veil however was at length removed by father *d'Entrecolles*, who, in a letter from China to father *Orry* in the year 1712, (which was published in French) describes the whole process in all it's circumstances; an extract whereof cannot fail of being agreeable to the curious reader. We have already observed*, that two kinds of earth are used in the composition of porcelane, the one called kaulin, full of glittering particles, and the other petunse, which is of a plain white, dug out of the mines in the shape of bricks, and much harder than the former. This last sort of earth is first broken and pounded into a coarse powder with iron hammers, wrought either by the hand or by mills; and when by repeating the operation, the powder is rendered almost impalpable, they throw it into a large urn full of water, stirring it briskly about with an iron instrument. Then letting the water rest a while, they skim from the top a white substance formed there, of the thickness of four or five fingers, putting this scum or cream into another vessel of water. They then stir the water of the first vessel a second time, and when it has settled they skim it again; and so alternately, till nothing remains at the bottom but the gravel of the petunses, which are committed to the mill for another grinding. As to the second urn, wherein the skimmings of the first were put, when the water is well settled and become quite clear, they pour it off, and fill a kind of moulds with the sediment collected at the bottom, which, when almost dry, they take out and cut into square pieces. The preparation of the kaulin is the same, only this being softer will dissolve in the water without pounding.

* See p. 104. of this volume.

A THIRD

A THIRD ingredient in the compoſition of porcelane is an oil or varniſh drawn from the hard petunſes, which for this purpoſe undergo the ſame preparation as for making the ſquares, except that the ſediment of the ſecond veſſel is not put into moulds, but the fineſt part of it uſed to compoſe the oil (as they call it) which is a whitiſh liquid matter. With this matter they mix a powder made of a calcined mineral ſtone called ſhekau, reſembling our alum, which gives the oil a good conſiſtence, but not ſo as to deſtroy it's fluidity.

THE oil of lime makes a fourth ingredient, the preparation whereof is more tedious than the former. They firſt ſprinkle water on quick lime, and thereby reduce it to a powder, on which they lay a bed of dry fern, and on the fern another of ſlacked lime, and thus alternately till they have a pile of a moderate height; which done, they ſet fire to the fern, and, the whole being conſumed, they ſprinkle the aſhes on new beds of fern, ſetting them on fire as before. This they repeat five or ſix times ſucceſſively, or even more; the oil being the better, the oftener the aſhes are burnt. A quantity of theſe aſhes are now put into a veſſel of water, and to every hundred weight of aſhes is added a pound of ſhekau, which diſſolves in the water. This mixture is well ſtirred together, then ſtands to ſettle, and, after a farther preparation in another veſſel, the ſediment at the bottom, which is to be kept liquid, is what they call the oil of lime, eſteeming it the ſoul of the former oil, and that which gives the porcelane all it's luſtre.—Ten meaſures of the petunſe oil are uſually mixed with one of lime; and, to have the mixture juſt, the two oils ſhould be of an equal thickneſs.

IT is almoſt inconceivable what a number of perſons are employed in this manufacture, there being

being ſcarce a piece of porcelane that does not paſs through more than ſixty hands before it is brought to perfection. The places they work in are vaſt incloſed yards, built round with ſheds and other conveniencies, as well as lodgings for the workmen. In mixing the two earths regard is had to the fineneſs of the ware intended to be made, equal quantities of petunſe and kaulin being uſed for the fineſt porcelanes, and one part of kaulin to three of petunſe for the coarſeſt. The hardeſt part of the work is the kneading and incorporating the two earths together, which is done in large baſons or pits well paved and cemented, wherein the workmen trample it continually with their feet, relieving one another, till the maſs be well mixed, grows hard, and is fit for the potter. After the earth is taken out of the pits, it is kneaded by piece-meal with the hands, on large ſlates; and on this operation the goodneſs of the work very much depends, the leaſt heterogeneous body, remaining in the maſs, or the leaſt vacuity, being enough to ſpoil the whole. The ſmalleſt grain of ſand, nay ſometimes a ſingle hair, will make the porcelane crack, warp, or ſplinter.

SMOOTH pieces of porcelane, ſuch as cups, ſaucers, diſhes, &c. are faſhioned with the wheel, like our earthen ware; but thoſe which are adorned with figures of animals, &c. in relievo are formed in moulds, and finiſhed with the chiſſel. Indeed all the porcelanes made in moulds are finiſhed by the hand, with ſeveral inſtruments proper to dig, ſmooth, poliſh, and touch up the ſtrokes that eſcape the mould; ſo that it is rather a work of ſculpture than of pottery. On ſome veſſels they add relievos ready made, as dragons, flowers, &c. and others have ornaments engraven

engraven with a kind of puncheons. The moulds are made of a yellow earth, well kneaded and beaten, and are sold very dear, but they last a long time.

IT is to be observed, that large vessels of porcelane are made at twice, one half of the piece being raised on the wheel by three or four workmen, who hold it till it has acquired it's figure; and, the other half being formed in the same manner, they join them together with porcelane earth dissolved in water, polishing the juncture with a kind of iron spatula. By the same means they join together several pieces of porcelane formed in moulds or by the hand; and also add handles, &c. to cups or other vessels fashioned by the wheel.

THE many hands which a common tea-cup passes through before it be fit for the painter may give us an idea of the number employed in other branches of this curious manufacture. The cup is begun by the potter, who has the management of the wheel, from whence it acquires it's form, height, and diameter; but it comes out of his hands very imperfect, especially towards the foot, which is only an uniformed lump of earth, to be cut with the chissel when the cup is dry. From the wheel the cup is received by a second workman, who forms it's base; and a third takes it immediately from him, and applies it to a mould on a kind of lathe, to give it it's true shape. A fourth workman polishes the cup with a chissel, especially about the edge, and brings it to such a thinness as is necessary to make it transparent; in doing which he moistens it from time to time, to prevent it's breaking. After this another turns it gently on a mould to smooth it's inside, taking great care that it be done equally, lest it should warp, or any cavity be formed. Some workmen add

add relievos, others adorn the veſſels with the graver or puncheon, others add handles, &c. each keeping to his particular employment. Even the rounding and hollowing the foot of a cup on the inſide with a chiſſel is the buſineſs of an artiſt who meddles with no other part. And this multiplicity of hands is ſo far from retarding the work, that it is found by experience to be carried on the faſter for it, as well as to be better performed; each workman, by a continual attention to the ſame thing, being more perfect and ready at it, than if he were frequently ſhifting from one operation to another.

THE painting is none of the leaſt beauties of the porcelane, but it would be a conſiderable addition to it if the deſigns were more juſt and regular. Their flowers and landſkips indeed are ſometimes tolerable, and their borders prettily variegated; but their human figures are monſtrous, and look as if they were fond of deviating from nature. This buſineſs is divided among a great many workmen in the ſame laboratory: One is employed in forming the coloured circle about the edges of the porcelane; a ſecond traces out flowers, which another paints; this is for landſkips only, that for birds and other animals, and a third for human figures. As to the colours of porcelane, they are various, both with reſpect to the ground, and the paintings. Some are ſimple, as all blues, which are thoſe uſually ſeen in Europe; others are made up of ſeveral teints, and others are heightened with gold.

THE blue is made of lapis lazuli calcined, and reduced to an impalpable powder by beating it in porcelane mortars not varniſhed, with peſtles of the ſame matter. For red they put copperas in a covered crucible, in the lid whereof there is a little hole, which they heat with a reverberatory fire till

till the black ſmoke ceaſes to aſcend, and a fine red one ſucceeds it. By this proceſs a pound of copperas yields four ounces of red liquor, which is found at the bottom of the crucible, though the fineſt part is that which adheres to the lid and ſides. The powder of a white tranſparent flint, calcined like the lapis lazuli, is alſo an ingredient in ſeveral of their colours. The green, for inſtance, is made with three ounces of the ſcoria of beaten copper, half an ounce of powder of flint, and an ounce of ceruſe. For violet, they add white to the green already prepared; and for yellow they uſe ſeven drachms of white, and three of the copperas red. Moſt of theſe colours are mixed with gum-water for application; a little ſalt-petre, ſometimes ceruſe or copperas, but more uſually the latter, being firſt diſſolved in the water. When the veſſels are to be quite red, the colour is uſually applied with the common varniſh of the petunſe; but there is another ſort of red, called blown red, becauſe applied by blowing through a pipe, one end whereof is covered with a fine gauze, on which the colour is ſpread, and by blowing at the other end the porcelane is ſprinkled all over with little ſtains, which are exceeding beautiful. This ſort of ware is very ſcarce, and of great value.—The black porcelane has likewiſe it's beauty, whoſe colour has a leadiſh caſt, and is uſually heightened with gold. Three parts of lapis lazuli, with ſeven of the common oil of ſtone, make this colour, which is not applied till the porcelane be dry. Gold is prepared for application by breaking it and ſteeping it in water till a thin gilded cloud riſes on the ſurface: It is uſed with gum-water, and to give it a body they add three parts of ceruſe to thirty of gold.

THERE

THERE are several other kinds of porcelane, but such as are rather for ornament and curiosity than for use. One of the prettiest is the magic porcelane, so called because the paintings of the cups do not appear, unless they are filled with liquor. The secret of making these magic porcelanes is said to be almost lost among the Chinese, but our author informs us they must be very thin; and the colours, which in other cups are applied on the outside, are in these applied on the inside. When the colours are dry, they are covered over with a size made of the porcelane earth, and thus they are inclosed between two earthen laminæ. After the size is dry, they pour oil into the cup; and, when it is saturated therewith, they return it to the wheel to be made as thin and transparent as possible. The colours here used are always the finest, and the figures painted are fishes, which are the most suitable, as they seem to swim in the liquor.

THE painting of the several kinds of porcelane being finished, and the colours dry, the next step is to polish them, to prepare them to receive the oil or varnish, whose composition has been already mentioned. This is done with a pencil of very fine feathers dipped in water, and brushed slightly over the porcelane, which takes off the least roughness or inequalities. It is then fit to be varnished, in which operation a great deal of care and skill are requisite, both that the varnish be laid on equally, and not in too large quantities; for it is applied thicker or thinner, and seldom or oftener repeated, according to the fineness of the porcelane.

WE now come to the last preparation of this brittle ware, viz. the baking of it, for which purpose the Chinese have two kinds of oven; large ones

ones for ſuch works as are only to be once baked, which is the common way; and ſmall ones for thoſe that require a double baking. The large ovens are two fathoms deep, and almoſt four wide, and the ſides and roof are ſo thick, that one may lay one's hand on them when the fire is at it's height, without danger of burning. They are built in form of a tunnel, having a large aperture at top to give vent to the ſmoke and flame, beſides four or five ſmall ones round them, which are opened or ſhut to diminiſh or augment the heat, like the holes called regiſters in the furnaces of chymiſts. Each oven is placed at the end of a long narrow paſſage, which ſerves inſtead of bellows, the wind being thus driven directly to the mouth of the furnace.

EVERY piece of porcelane of conſiderable value is diſpoſed in the oven in a ſeparate caſe or coffin; but as to tea-cups, and ſuch ſmall veſſels, the ſame caſe ſerves for ſeveral. Theſe caſes are made of the ſame earth with the oven, and uſually of a cylindrical form, that the fire may communicate itſelf the more equably to the porcelane incloſed. The bottom of each caſe is ſprinkled over with very fine ſand covered with duſt of kaulin, that the ſand may not ſtick to the work; and care is taken that the porcelane do not touch the ſides of the caſes. In the larger caſes, which contain the ſmall pieces, they leave the middle vacant, becauſe the veſſels placed there would want the neceſſary heat; and each of theſe little pieces is raiſed on a ſmall maſs of earth covered with powder of kaulin. The porcelane is put into caſes leſt the too violent effects of a naked fire ſhould diminiſh it's luſtre; for it is owing to theſe thick coverings that the beautiful complexion of the ware is not tarniſhed by the exceſſive heat.

As

As fast as the cases are filled, a workman ranges them in the furnace, forming them into piles or columns, whereof those in the middle are at least seven feet high. The cases of the finest porcelane are placed in the center, and the coarsest at the bottom; and in this manner the whole cavity of the oven is filled with piles, except that part directly under the large aperture. These piles are placed near one another, and are so bound together at top, at bottom, and in the middle, as that the flame may have a free passage among them, and insinuate itself equally on all sides; in which lies a great part of the workman's art, and on which the goodness of the porcelane much depends. Another thing they observe is, never to fill an oven with all new cases, but half new, half old; the old ones being set at the top and bottom of the pile, and the new ones in the middle. These cases are yellow before they are burnt, but afterwards of a dark red.

When the oven is full, the door or mouth is walled up, only a little hole being left to throw in small pieces of wood to feed the fire. It is then heated gradually for four and twenty hours; after which two men, who relieve one another, throw in fuel without intermission: And, what seems very strange to our author, the workmen thus employed about the furnaces drink hot tea with salt dissolved in it to quench their thirst. To know when the porcelane is sufficiently baked, they open one of the little holes above-mentioned, and with a pair of tongs take off the covering from the top of one of the piles; and if these appear to be equally heated, and the colours of the porcelane uncovered have a noble lustre, they discontinue the fire, and close up the aperture left at the mouth of the furnace. After the fire is extinguished, if the baking

consist

consist of cups and such-like small vessels, they let them remain in the oven about twelve or fifteen hours; but, if the porcelane be large, they defer opening it for two or three days: In which particular the modern practice differs from the ancient, wherein all kinds of vessels remained in the oven considerably longer.

THERE is another sort of porcelane which is twice painted and twice baked, for which they have little ovens on purpose. Some of these are made of iron, and are very small; others of a kind of bricks, of the same earth with the porcelane cases. The largest of them, however, does not exceed five feet in height, and three in diameter, being built in the form of bee-hives. Round the oven, at about half a foot distance, is raised a shell of common bricks, joined to the oven itself by a kind of arch which serves to strengthen it; and four or five of these are usually built at equal distances from each other. At the bottom of the shell are holes to give air to the fire, and at the top there is an aperture, which is covered when the porcelane is put into the oven. The ware here is not inclosed in coffins, as in the larger furnaces, the oven serving for that purpose, and being so exactly closed that the vessels receive no impression of the fire but what proceeds from the charcoal disposed in the hearth at the bottom of the oven, and in the interval between the oven and external shell.

TO prepare the porcelane for this second baking, it is varnished in the common manner; and, having passed the great oven, it is then painted with various colours, after which, without any additional varnishing, it is ranged in piles in the little oven, the small vessels being placed upon the larger in form of pyramids. The intent of the second

second baking is sometimes to preserve the colours the better, and to give them a sort of relievo; but it's more usual design is to hide defective places with the colouring, though this artifice is not difficult to be discovered.

Our curious author farther observes, that the taste for antiquity, which reigns in China as well as in Europe, gives the ancient porcelane a value far above that of the modern, insomuch that some workmen make it their business to counterfeit the former.—With respect to the dearness of porcelane, notwithstanding the vast quantity thereof which is made in China, he says it is chiefly occasioned by frequent miscarriages in the baking of it, as it rarely happens that an oven succeeds throughout. Sometimes it is quite spoiled, so that upon opening it, instead of fine porcelane, is found a hard unformed mass, into which both the vessels and their coffins are converted, either by excess of heat, or some ill quality in the matter. Another reason of it's dearness, besides the great profit of the European merchants and their factors, is the ingredients it is made of, and the wood used in burning it, growing more and more scarce. To which a third reason, and that none of the least, may be added, viz. that most of the porcelanes made for Europe are formed on new models, frequently very difficult to succeed in, which yet, for the smallest defects, are turned upon the hands of the manufacturer; and he, not being able to sell them to the Chinese, because not to their taste, is forced to put a higher price on the porcelanes he vends, to pay himself for those refused.

The

The remarkable cuſtoms of the CHINESE and JAPANESE.

THE Chineſe are not ſuch groteſque figures as they repreſent themſelves in their paintings: We may form a pretty juſt idea of their perſons, from conſidering their idea of beauty, which they imagine conſiſts in having a large forehead, a broad face, ſmall eyes, a ſhort noſe, large ears, the mouth of a moderate ſize, and black hair, with a certain ſymmetry between all the features. As they wear wide garments, they have formed no idea of the beauty of a genteel and eaſy ſhape, and therefore eſteem a man well made, when he is fat and bulky. In the ſouth of China, they are of an olive complexion, but, in the northern provinces, are as fair as many of the Europeans.

THEIR women are of the middle ſize, and are much admired for the ſmallneſs of their feet, which, in the opinion of the Chineſe, are none of the leaſt charms. Therefore, when a female infant is born, the nurſes carefully bind the feet extremely hard, to prevent their growing, and they are ever after ſubject to the ſame conſtraint; whence they have the feet of children, with the bodies of women; and rather hobble than walk, with ſteps tottering and unſteady.

THE men ſhave their heads, leaving only one lock of hair growing on the crown; and, in ſummer, wear a ſmall cap, in the form of a funnel, with a tuft of hair on the top; but, in winter, they have a warm ſort of cap of red ſilk, bordered with ſable, ermine, or fox-ſkin. The men wear a veſt with long ſleeves, which come down to their fingers ends; over the veſt they wear a looſe coat, ſhorter than the veſt, with ſhort ſleeves; and when they

they visit, or receive company, they have a gown thrown over all; they wear also shirts and breeches, or rather trowsers, which reach down half-way their legs; these are made of sattin quilted. They wear likewise silk boots, quilted an inch thick; and over the foot put on a slipper, with a thick sole; for the boots have no soles. At their girdles they hang their pouch of tobacco, their pipe which is of brass; their handkerchiefs, the little chop-sticks they eat with, and their knife; for they have no pockets. In winter people of distinction wear rich furs, lamb-skins, or quilted cotton. Their scymetars or broad swords are worn on the left thigh, with the point bending forwards. It is remarkable that the learned, especially if they are of base extraction, affect to let the nails of their little fingers grow an inch long or more, from the vanity of shewing that they are not subject to labour. Magistrates and officers of state have some animal embroidered on their cloaths, either in gold or silver, expressive of the nature and dignity of their respective offices. Thus the military men chuse lions, tygers, and dragons; and the civil magistrates birds.

THERE are no people upon earth so ceremonious as the Chinese; their politeness consists in such insignificant trifles, and such abject submissions, as could never be generally practised by any nation inspired with the love of liberty, or that has just sentiments of the dignity of human nature. If two mandarins of equal rank meet in the street, they salute each other, without leaving their chairs, by lifting up their joined hands to their heads, repeating it several times, till they are out of each other's sight; but, if one of them is of an inferior rank, he must stop his chair, or, if on horse-back, alight, and make a profound reverence to the

ſuperior mandarin. At entertainments, every one has a little chopſtick, which he lifts to his mouth, at the ſame time with the reſt of the company. They drink alſo all at once, taking the cup in both hands, lifting it to their forehead; then bowing very low, riſe and put it to their mouth, while the maſter of the feaſt, kneeling, intreats the gueſts to drink all up; and a man ſtands by to keep time, that one may not eat or drink before another. When a freſh diſh appears, they again flouriſh their chopſticks; and, having taken two or three mouthfuls, the maſter of the ceremonies makes a ſign for them to lay them down, which they do with as much order, as they uſed in taking them up. Thus the ſocial entertainments of the Chineſe are conducted in ſo ceremonious a manner, that they would be inſupportable to an European.

THE Chineſe eat all manner of fleſh, fiſh, or fowl, whether it be killed or die in a ditch; but their moſt favourite diſh is horſe-fleſh, eſpecially among the Tartars. The meat is cut into little ſquare bits, before it is brought to the table; for they uſe neither knives, forks, nor ſpoons, but put the meat into their mouths with their chopſticks, which are two ſmall ivory ſticks, ſometimes adorned with gold or ſilver. They ſit upon chairs at table, as we do, contrary to the cuſtom of the reſt of the Eaſt. Their cooks have the art of ſeaſoning their meat and fiſh in ſuch a manner, as to render it agreeable to the taſte; and their ſoups are excellent. Their liquor is chiefly tea, but they have alſo a ſort of brown beer, made of wheat, and ſome ſpirits.

MARRIAGE is eſteemed ſo reputable in China, that no man can live ſingle twenty years, without being pointed at. The inclinations of the children

are

are never consulted; for the choice of a wife belongs either to the father, or to the nearest relation of him who is to be married. But, as young women are always confined, and men are not permitted to see them, old women, whose business it is to transact these affairs, act as agents, and, when by their means every thing is settled, a contract is signed, by which the relations of the husband agree to give a certain sum, which is employed in buying new cloaths and other things for the bride, the daughters having no fortunes. The bride's relations determine the day of marriage, and frequently consult the calendar, for one that is fortunate. Mean while the man sends his intended bride jewels, pendants, and the like. On the nuptial day, the bride is carried in a chair, attended by a pompous cavalcade, to the husband's house, who, on opening the chair, sees her for the first time. Some, dissatisfied with their lot, shut the chair again, sending the girl and her relations back, chusing rather to lose the money given, than to receive a disagreeable person; but this seldom happens. The bride, on leaving the chair, goes with the bridegroom into a hall, where they make four reverences to Tien, whom they call the spirit that presides in heaven; and, having done the like to her husband's relations, she spends the day with the ladies who are invited, in feasts and diversions, while the bridegroom treats his friends in another room, and at night consummates the nuptials.

THOUGH the Chinese can have but one wife, they are allowed to have several concubines; but these are intirely dependant on the wife, serve her, treat her as their mistress, and all their children are considered as the children of the wife, and have an equal right with them to inherit the father's fortune. None but the wife has the name of mo-

ther; and, if a concubine dies, her children are not obliged to go into mourning for her.

IF a man has once received his wife, he cannot turn her off, except for adultery, or some notorious crime; in which cases he may sell her, and purchase another with the money. The common people seem so much ashamed of living single, after the age at which it is customary to marry, that, when unable to purchase a wife, they will sometimes consent to be a slave, on condition of marrying a slave in the family. The Chinese women, being seldom allowed to appear in company, amuse themselves in painting or needle-work, or with their dogs, birds, or other animals. A father has the power of a despotic tyrant. Let a son be grown ever so rich, and a father ever so poor, there is no submission, no point of obedience, that he cannot command, or that the son can refuse. He is absolute master, not only of his estate, but also of his concubines and children, whom, whenever they displease him, he may sell to strangers. If a father accuses a son before a mandarin, there needs no proof of his guilt; for they cannot believe that any father can be so unnatural as to bring a false accusation against his own son. But, should a son arrive to such a pitch of wickedness as to strike his father, the whole province is alarmed; the emperor himself judges the criminal; all the mandarins near the place are turned out of their posts, for having been so negligent in their instructions; the unhappy wretch himself is cut into a thousand pieces, his bones burnt, his house levelled to the ground, and even the houses that stood near it; and memorials are set up of the horrid deed. Yet a parent, when pinched with poverty, may expose a helpless infant in the fields, with impunity, which is frequently done.

THE

THE Chineſe no ſooner arrive at years of maturity, than they provide for their deaths, by purchaſing a coffin, which is kept among their other moveables, to put them in mind of their mortality. Theſe coffins are made of a very laſting wood, ſometimes ſeven or eight inches thick, which makes them appear much larger than ours; but they are nearly of the ſame form, and finely japanned on the outſide, which ſerves to render the wood more durable, as well as more beautiful. It is uſual for the rich to expend from three hundred to a thouſand crowns, on a coffin of precious wood, finely carved, japanned, and gilt. Though they are prohibited from burying the dead within the walls of the city, yet they often keep them in their houſes ſeveral months, and even years. At firſt all the relations and friends that are invited, come to pay their reſpects to the deceaſed, when the coffin, covered with white linen, is expoſed in the principal room, and a table placed before it, on which is an image of the deceaſed, ſurrounded with flowers, perfumes, and wax candles. Before it they proſtrate themſelves, beating their foreheads againſt the floor; and then place on the table candles and perfumes, which they brought with them, accompanying theſe ceremonies with tears and groans. The eldeſt ſon, accompanied by his brothers, then enters; and with countenances full of grief, without ſpeaking, proſtrate themſelves, and ſtrike their foreheads againſt the floor, while the women, who are concealed behind a curtain, ſend forth mournful cries. This ceremony being ended, they all riſe, and a friend, in mourning, conducts the viſiters into another room, where they are entertained with tea and dried fruits. The ſons, for ſeveral nights, ſleep upon matts round the coffin, and abſtain from all fleſh meat, ſtrong li-

quors, and the commerce of women. Nor must the son enter upon any office or employment for three years after his father's death; and it is reckoned impious, even to laugh, or to take any kind of pleasure, during this time of mourning.

THE friends and relations being invited to attend the corpse to the grave, the procession is begun by persons carrying pasteboard figures, representing slaves, tygers, horses, &c. Several companies follow, marching two and two, some carrying flags, standards, perfuming-pans; and others play mournful tunes on various musical instruments. In some places the picture of the deceased, with his name and office, in large golden characters, is carried above the rest; then follows the coffin, covered with a canopy, in the form of a dome, of violet-coloured silk, embroidered with tufts of white silk, at the corners of the frame. The eldest son, at the head of his brothers, follows on foot, covered with sackcloth; and after them proceed the other relations and friends, all in mourning; followed by chairs covered with white stuff, in which are the wife, daughters, concubines, and slaves of the deceased, who make the air resound with their cries.

WITH these and other ceremonies, the corpse is deposited in the tomb, which is generally whitened and surrounded with a grove of pines or cypress. Before the corpse an altar is erected, and lights are left burning upon it. The friends of the deceased visit the tomb at certain seasons, prostrating themselves before it, with their faces to the ground. To the corpse they burn incense, pour out wine, and offer dishes of meat, upon which the priests feast, when they are gone.

WITH

WITH reſpect to the feſtivals of the Chineſe, one of the moſt ſingular is the feaſt of lanthorns, which is annually performed, when every family, both in the cities and country, light up painted lanthorns, ſome of which are of an incredible ſize, and of different forms. Many are compoſed of ſix ſides; the frame is of japanned wood, adorned with gilding; and on every ſquare is ſpread fine tranſparent ſilk, on which are painted flowers, trees, animals, and human figures. The top is crowned with various carved work, from whence hang ſilk ſtreamers of different colours, that fall upon the ſix corners, without hiding any of the light, or of the pictures; for on the inſide are put a great number of candles and lamps, that give a brilliancy to the pictures, and diffuſe a ſplendor that is extremely agreeable. Several of them repreſent horſes galloping, ſhips ſailing, armies marching, and the like, performed by moving pictures, ſet in motion by people who lie concealed. What adds an additional ſplendor to this feaſt, are the fine fireworks exhibited in all parts of the cities.

THE principal religions of China are that of Confucius, which is followed by the learned; and that of Fo. That truly great man Confucius, made a collection of the moſt excellent maxims of the ancients, which he taught to the people. He ſpoke of God as of a moſt pure and perfect ſpirit, and preached up a ſevere morality, teaching his followers to contemn riches and worldly pleaſures, and to eſteem temperance, juſtice, and the other virtues. He ſtrove to inſpire them with ſuch magnanimity as to be proof againſt the frowns of princes, and with a ſincerity incapable of the leaſt diſguiſe. What is moſt to be admired, was his preaching more by his example than by his words; whence kings were governed by his counſels, and

the people revered him as a ſaint. Yet he frequently met with reverſes of fortune, which obliged him to travel from province to province, and was often reduced to ſuch extremities, that he was in danger of ſtarving. This is now the religion of the learned, who, while they pay homage to the memory of Confucius, are far from following his precepts, or imitating the innocence and ſanctity of his life; but they annually celebrate a feſtival to his honour, in which are obſerved ſeveral ſuperſtitious ceremonies.

THE religion of Fo, or Foë, was brought from India, and ſpread through all the Eaſt. This Fo is ſuppoſed to be the ſame with Brama, whoſe ſoul, it is pretended, ſucceſſively paſſed through a great number of animals. The bonzes of China ſay, that after death the good will be rewarded, and the wicked puniſhed; that man ought not to kill any living creature; not to take what belongs to others; not to be guilty of impurity; to forbear lying; and to drink no wine. Theſe bonzes are, however, ſo far from poſſeſſing the benevolence and charity of the prieſts of India and Siam, that they are repreſented as notorious cheats and impoſtors; their religion appears a groſs corruption of that of the Gentoos of India; and they frequently impoſe upon the many Chineſe, who believe the doctrine of the tranſmigration of ſouls. La Compte tells ſeveral ſtories to this purpoſe; one of which we ſhall only mention: Two bonzes, ſeeing in the yard of a rich peaſant, two or three large ducks, proſtrated themſelves on their faces, ſighing and weeping bitterly. The good woman obſerving them from her chamber-window, came down to learn the cauſe of their grief, when they told her that the ſouls of their fathers had paſſed into the bodies of theſe ducks; and the dread of her killing

ing them would make them die with affliction. The woman acknowledged that she had intended to sell them, but promised that, as they were their fathers, she would keep them. This was not what they wanted; they objected that her husband might not be so charitable, and that if any accident happened to them they should die. At length, after a long discourse, the good woman, moved at their pretended grief, committed the ducks to their care. The bonzees prostrated themselves before them twenty times, took them up with great respect, and that evening made a feast of them for their society.

As they cannot treat people every day in this manner, they endeavour to get money by public acts of pennance, for which they are highly esteemed by the people, who shew them much pity and compassion: Some drag after them a long chain, fastened to the neck or legs, crying at every door, "Thus we expiate your sins, and sure this deserves "an alms." Others, in public places, beat their heads against a stone, till they are almost covered with blood; and others sit in a sedan chair, stuck full of nails, with their points inwards.

THOUGH the mandarins profess a detestation of the worship of idols, yet, when there is a great drought, too much rain, or the country is ravaged by locusts, they endeavour to please the people by having recourse to these idols, and paying solemn visits to their temples, sometimes negligently dressed, and with shoes made of straw; but, if the favour they want be too long delayed, they cause the idol to be well cudgelled. On this occasion, says, La Compte, they address them in the most rude and reproachful terms, crying, "Thou dog of a spirit, "we give thee a lodging in a magnificent temple; "we gild thee; we present thee food; we offer

" thee incenſe; yet after all thou art ſo ungrateful " as to refuſe to grant our requeſts." Then tying the image with cords, they pluck it down, and drag it along the ſtreets, through all the mud. But if in the mean time, they obtain what they wanted, they inſtantly, with much ceremony, waſh the idol clean, carry it back, and replace it in the niche where it ſtood before. Then falling down before it, apologize for what they have done. " Indeed, ſay they, we were a little too haſty, " and thou wert too long in beſtowing thy favours. " Why didſt thou bring this treatment on thy- " ſelf? But what is done cannot be helped; let " us therefore think of it no more. If thou wilt " forget what is paſt, we will once more cover " thee with gold."

THE Chineſe are very ſummary in the diſtribution of juſtice. Cauſes are generally decided, and ſentence paſſed by a ſingle mandarin, who, after a ſhort proceſs, and the examination of both parties, orders the perſon who has loſt the cauſe to be baſtinadoed, either for carrying on an unjuſt proſecution, or maintaining a cauſe contrary to equity. The next puniſhment is wearing a wooden collar. Theſe, except impriſonment, are all the puniſhments which the Chineſe laws permit the mandarins to inflict on criminals; they may indeed condemn to exile, but their ſentence muſt be examined by the ſupreme courts. The capital puniſhments are ſtrangling. Mean and ignoble perſons are beheaded; for, in China, the ſeparation of the head from the body is diſgraceful; on the contrary, perſons of quality are ſtrangled, which is a more honourable death; but, if their crimes are very great, they are puniſhed like mean perſons, and ſometimes their heads are cut off, and hung on a tree in the highway. Murder is puniſhed with

with death; rebels, traitors, and the servants who murder their masters, are cut in pieces; but for adultery and theft, where no violence is offered, the offender escapes with a severe bastinado.

WHAT is called cutting in pieces, is a most cruel punishment. The executioner fastens the criminal to a post; then fleaing the skin off his head, pulls it over his eyes; and afterwards mangles him, by cutting pieces from all parts of his body; and, when he is weary of this barbarous exercise, he leaves him to the cruelty of the populace.

THE wooden collar, mentioned above, is an extraordinary punishment; it is formed of two pieces of wood, hollowed in the middle for the neck, with long slips of paper upon it, expressing the crime for which the punishment is inflicted, and the time it is to last. For instance, if it be a thief, a seditious person, a gamester, or a disturber of the peace of families, he must wear it three months. When it is put on, the person cannot put his hand to his mouth, but is obliged to be fed, and to carry this disagreeable load day and night. Some weigh two hundred pounds, and some are three feet square, and five or six inches thick: the common sort weigh fifty or sixty pounds; this kind of pillory being lighter or heavier according to the nature of the offence. The criminals are generally exposed in some public place, but they find various ways to ease themselves; some walk with their relations and friends, who support the four corners, that it may not gall their shoulders; others have a chair to support the four corners, and some kneel down, and, placing the edge of the collar on the ground, amuse themselves with viewing the people as they pass.

THE constitution of the Chinese government is in many instances regulated with consummate

wisdom, and nothing could exceed the order established by the Chinese laws, if the mandarins strictly conformed to them; but this is far from being the case; for, in order to promote their private interest, they make no scruple of violating the laws of justice and humanity, and the people in general are perhaps the greatest cheats under the sun. Interest is the moving spring of all their actions. When any thing is to be gained, they employ their utmost cunning to obtain it; artfully insinuate themselves into the favour of those who are capable of promoting their views; with wonderful dexterity assuming all characters, and turning the merest trifles, to their advantage. When they have dealings with strangers, they seldom fail to cheat them, when it lies in their power; and use a thousand tricks to adulterate and disguise what they sell. There are some, says our author, that have the secret of opening the breast of a capon, taking out all the flesh, filling up the skin, and closing it again so dexterously, that it is not perceived till it comes to be eaten; and they are said to counterfeit hams and gammons of bacon with such art, that the deceit is not discovered, till they are going to be carved, when they find nothing but a great piece of wood under a hog's skin. It is certain that a stranger will be generally cheated, if he buy alone; and he has no other way of preventing it, than by employing a trusty Chinese, well acquainted with all their tricks; and he will then be very happy, if he that buys and he that sells do not join in the fraud, and go shares in the profit. The many artifices, extortions, and frauds, practised on commodore Anson and his people, are a sufficient proof of the truth of these observations, which had been made long before by the

the miſſionaries who had reſided a conſiderable time in the country.

WITH reſpect to the other parts of their character, they are extremely puſillanimous, and no people upon earth are more proud of their pretended grandeur, and the pre-eminence they imagine they have a right to claim over all other nations. This haughtineſs inſpires the meaneſt amongſt them with a contempt for other countries; and they are ſo full of their own cuſtoms, manners, and maxims, that they can ſcarcely believe that there is any thing good or great out of China; though they are a little more moderate than they once were, ſince they became acquainted with the Europeans.

IT is proper now to take ſome notice of the Japaneſe, whoſe dreſs commonly conſiſts in a ſhort veſt next the ſkin, a long gown over it, and, what is pretty ſingular, a cloak or mantle within doors, which they pull off when they go abroad. Notwithſtanding their being ſhaved, one lock alone being left on the crown of the head, they commonly go bareheaded; but, when they walk abroad, generally make uſe of an umbrella, which thoſe in genteel circumſtances have carried over their heads by a ſervant; but in travelling, inſtead of an umbrella, they wear a large tranſparent hat, exceeding light, neatly made of ſplit bamboos. This hat is not only worn by men on their journies, but by women in cities and villages, at all times, and in all weathers. Travellers have alſo a long cloak againſt rainy weather, made of double varniſhed oiled paper, ſo large and wide, as to cover, not only the man and his baggage, but the back and ſides of the horſe. Travellers alſo wear very wide drawers, which cover their legs; and ſome, inſtead of ſtockings, wrap a broad ribbon about their legs.

Ordinary

Ordinary servants wear no drawers, and, for expedition-sake, tuck their gowns quite up to their belts, exposing their backsides and privy parts, which they say they have no reason to be ashamed of. As both sexes never go abroad without fans, in their journies they commonly use such as have the roads printed upon them, and tell how many miles they are to travel, what inns they are to go to, and what is the price of provisions. The Japanese, who are generally short and thick, make a very odd figure, with their large hat, wide breeches and cloak, together with their sitting cross-legged on the horse, which makes them appear broader than they are long. The traveller does not trouble himself with the bridle, the horse being led by one of his footmen, who walks on the horse's right side, near the head, both he and his companion singing merry songs to divert themselves, and animate the horses. The great men are carried by their servants, in a kind of sedan, though the journey be ever so long. Both the rich and poor wear a sword by their side, or at least a dagger, and a fan in their hand; but the nobility and soldiers have the privilege of wearing two swords.

NOTWITHSTANDING the extreme superstition of the Japanese, which appears on every occasion, their behaviour, from the meanest countryman up to the greatest lord, is such, that the whole empire may be termed a school of civility and good manners; and, were they not absolutely denied a free correspondence with foreigners, they would receive them with the utmost kindness and pleasure. They do not want generosity and humanity, but are extremely vindictive, when injured; and mutual enmity seldom ceases, but with the death of one of the parties. They are not deficient in personal bravery; they are industrious; and

and inured to hardſhips; are ſatisfied with little; and the generality live on plants and roots, turtle, ſhell-fiſh, ſea-weeds, and the like. Water and tea are their common drink; and they ſleep on a matt, uſing, inſtead of a pillow, a block of wood, ſomewhat hollowed in the middle; yet they are very nice in keeping themſelves, their cloaths, and their houſes, neat and clean. They differ from the Chineſe in many particulars; are more ingenious, and excel them in the arts, particularly in carving, engraving, gilding of metals, and the beauty of their porcelane and japanned work; and, while the Chineſe are juſtly conſidered as a crafty, cunning, and knaviſh people, the Japaneſe are admired for their ſtrict honeſty, faithfulneſs, and generoſity; and no people are more careful to breed up their children to a love of theſe, and every other virtue.

THEIR marriages are celebrated at the foot of an idol, where the bridegroom and bride have two tapers or lamps put into their hands, while the prieſt pronounces the words: after which the bride throws the toys ſhe had played with in her childhood into the fire, and in their ſtead receives from her relations preſents ſuitable to her preſent condition, with their congratulations and good wiſhes. At length, after ſome offerings made to the idol, the whole company, attended with vocal and inſtrumental muſic, are conducted to the bridegroom's houſe, where the feaſt laſts a week. The noble and wealthy ſtrive to honour the day with great pomp and ceremony, and abundance of ſuperſtitions are impoſed upon the credulous laity by their prieſts.

THEIR government is perfectly deſpotic, and regulated in a manner very ſingular and peculiar to themſelves; but conſiſts of ſuch a number of regulations,

regulations, to preſerve order and harmony amongſt them, that we have not room to enter upon the particulars. There is ſcarce any crime but is puniſhed with death, except the criminal be a prince or petty king; for the emperor has ſeveral tributary monarchs under him. Theſe are generally baniſhed to ſome barren iſland; but other perſons, immediately upon conviction before a proper judge, are hurried to execution. Cheating of any kind, even at play; a lye, or prevarication before a magiſtrate; theft, though of the ſmalleſt kind; a breach of the peace, a blow, detraction, or other wrong to a man's good character, are all puniſhed with death; and it muſt be a very trifling injury, or be alleviated with ſome very favourable circumſtances, that is ſuffered to eſcape with a pecuniary puniſhment. As for corporal puniſhments ſhort of death, they are ſeldom uſed but by maſters on their ſlaves. In crimes againſt the government, or againſt the public peace, not only the criminal himſelf, but his parents, brothers, children, and even more diſtant relations, are all put to death at one and the ſame hour, let them be at ever ſo great a diſtance from each other, by ripping open their bowels. But, as for the female relations, they are generally treated with leſs ſeverity; for, except in caſes of high treaſon, the wives and daughters are only ſold for ſlaves.

ONE of the moſt remarkable ceremonies of the Japaneſe is only obſerved in the city of Nagaſaki, where the Chriſtian religion had once the ſtrongeſt footing; but the inſolent behaviour of the Portugueſe prieſts to ſome of the nobility, and their engaging in a plot to dethrone the emperor, who had granted them his protection, and place a Chriſtian on the throne, occaſioned their expulſion and a dreadful perſecution. This ceremony is

called

called the figure-treading; for, in the beginning of the year, they annually trample, with great ceremony, upon a crucifix, an image of the Virgin Mary, or some other saint, as a proof of their renouncing the Christian religion. They begin in two different parts of the city, going from house to house, and street to street, till all the people, both old and young, have trampled on these images, which are of brass, and about a foot long; even young children, unable to walk, are held by their mothers, to touch the images with their feet. It has been asserted that the Dutch submit to this ceremony, to shew they are not Christians; but Mr. Kœmpfer, the latest and infinitely the best and most accurate writer that has described this country, asserts, that this is an unjust calumny, and maintains that they freely own their being Christians, but justly maintain that their sentiments are very different from those of the Portuguese.

THE Dutch indeed are the only Europeans who trade to Japan, from whence they bring a very great quantity of refined copper; some of a coarser sort of Japanese camphire; some hundred chests of Japanese porcelane; all sorts of japanned cabinets, boxes, chests of drawers, and the like; umbrellas, screens, and hanging paper; a great deal of gold in specie; rice, tea, pickled fruits, and marmalades.

HAVING thus given an account of the most remarkable curiosities of China and Japan, it remains to take a view of the Asiatic islands in the Indian ocean, which are very numerous, and which we thought more proper to be considered all together, than to interrupt our survey of the continent.

CHAP.

CHAP. V.

Of the INDIAN ISLANDS.

FOSSILS, VOLCANOES, SPRINGS, &c.

THE chief of these islands, which are almost innumerable, are Formosa, Tinian, Manila and Mindanao, (two of the Philippines) Borneo, Celebes, Java, Sumatra, Ceylon, and the Banda islands. Many of their productions being the same with those already described in speaking of the Asiatic continent, we shall not have occasion to say much more concerning them. The island of Borneo, for instance, produces abundance of diamonds and other precious stones, for an account whereof we refer the reader to the chapter which treats of the East-Indies. Several of these islands have likewise mines of gold, silver, copper, and iron; and gold-dust is frequently found among the sand of their rivers. The mountains of Formosa are full of brimstone, which makes the island subject to earthquakes. In the Philippine islands there are several burning mountains, which have all the dreadful effects of Ætna and Vesuvius, being attended with violent earthquakes rending the very rocks, and scattering showers of ashes round the country. From these subterraneous fires proceed a great variety of hot baths, and some of their streams are said to be so hot as to kill any animal that happens to fall into them; but the water, when cool, is well tasted, and reckoned a wholsome drink. About half a mile from one of these hot rivers is another excessive cold one, and yet esteemed equally wholsome with the former for common drinking. There is a volcano in the middle

middle of the island of Sumatra, and *Nieuhoff* mentions several sulphureous springs issuing from the rocks, whose water resembles oil, is good against lameness, and has a strong but no nauseous smell. It is so much valued for it's medicinal qualities, that we are told the king of Achen prohibits the exportation of it on pain of death.

In Ceylon they have mines of gold and silver, but it does not appear that any are wrought except those of iron, of which they have great plenty, and their steel is well tempered. Amongst the precious stones to be found in this island the rubies are remarkably fine, this gem being no where so common as here and in the kingdom of Pegu*. The cat's-eye is a singular kind of stone already described†, and chiefly to be met with in Ceylon and Borneo, though not peculiar to those islands. Most of the other gems are found in Ceylon, which it is said are all engrossed by the king; and it's mountains afford plenty of white, red, and green crystal, besides salt-petre, sulphur, and other mineral substances.

Tinian, one of the Ladrone islands, may be justly stiled a little paradise. This island is only about twelve miles long, and half as much in breadth, but the soil is every-where dry and healthy. The land rises in gentle slopes from the sea-shore to the middle of the island, though the general course of it's ascent is frequently interrupted by vallies of an easy descent, many of which wind irregularly through the country. These vales, and the gradual swellings of the ground, are most beautifully diversified by the mutual incroachments

* See p. 13, of this volume.
† See p. 17.

of

of woods and lawns, which coaſt each other, and traverſe the iſland in large tracts. The woods conſiſt of tall and ſpreading trees, moſt of them diſtinguiſhed, either by their beauty or their fruit; while the lawns are uſually of a conſiderable breadth. Their turf is clean and uniform, it being compoſed of a fine trefoil, intermixed with a variety of flowers. The woods are in many places open, and free from all buſhes and underwoods; and the neatneſs of the adjacent turf is frequently extended to a conſiderable diſtance, under the hollow ſhade formed by the trees. Hence ariſes a multitude of the moſt elegant and entertaining proſpects, according to the different blendings of theſe woods and lawns, as they ſpread themſelves differently through the vallies, and over the ſlopes and declivities with which the place abounds.

THERE are indeed no ſtreams in the iſland, yet the water of the ſprings, which are every-where to be met with near the ſurface, is extremely good, and, near the center of the iſland, are two or three pieces of excellent water, the turf of whoſe banks is as clear, as even, and as regularly diſpoſed, as if they had been baſons formed for the decoration of the place. Theſe waters abound with duck, teal, and curlew; and a prodigious plenty of the whiſtling plover is contained in the iſland.

THE beauties of this delightful ſpot, are not ſolely confined to the excellency of it's landſcapes, ſince the animals, which during the greateſt part of the year, are it's only inhabitants, in ſome meaſure partake of the romatic caſt of the iſland; for the cattle, of which it is not unuſual to ſee herds of ſome thouſands feeding together in a large meadow, are all of them milk-white, except their ears, which are generally brown or black; and, though there are no rational inhabitants, the noiſe

of

of domeſtic poultry, which in great numbers range the woods, contributes to the chearfulneſs and beauty of the place, by raiſing the idea of the neighbourhood of farms and villages.

THE cattle, which are ſaid to amount to at leaſt ten thouſand, are far from being ſhy; they are extremely well taſted, and their fleſh of an eaſy digeſtion. There are alſo abundance of wild hogs, which are excellent food; but are very fierce, and can only be obtained by ſhooting them, or hunting them with dogs. The fowls too are exceeding good; and theſe are eaſily run down. The country is equally to be admired on account of it's fruit, and vegetable productions, happily adapted to the cure of the ſcurvy; which is of peculiar advantage, as this iſland is on the borders of the vaſt Eaſtern ocean. In the woods are inconceivable quantities of cocoa-nuts, with the cabbages growing on the ſame tree, beſides, guavas, ſweet and ſour oranges, and a kind of fruit, ſaid to be peculiar to this and the neighbouring iſlands, called, by commodore Anſon's people, the bread fruit, of which we ſhall give a particular account, in treating of the vegetables of the Indian iſlands.

THIS iſland has remains of buildings that ſhew it was once extremely populous; for in all parts of it are ruins of a particular kind; theſe uſually conſiſt of two rows of pyramidical pillars, each pillar being about ſix feet from the next; and the diſtance between the rows about twelve feet: they are about five feet ſquare at the baſe, and about thirteen feet high, bearing, on the top of each a ſemi-globe, with the flat ſurface upwards. The whole of the pillar and ſemi-globe is ſolid, being compoſed of ſand and ſtone cemented together, and plaſtered over. Theſe were ſaid, by the

the neighbouring Indians, to be foundations of particular buildings, set apart for only those of the natives who had engaged in some religious vow. But, were they originally the bases of their common dwelling-houses, their number must have been very considerable; for, in many parts of the island, they are planted very thick, and sufficiently evince the multitude of it's former inhabitants.—This account we have inserted here, from commodore Anson's voyage, as it can no where be better placed than in a work which professedly treats of the beauties of nature.

VEGETABLES.

THE bread fruit grows upon a lofty tree, which, near the top, is divided into large spreading branches; the leaves are of a remarkable deep green, notched about the edges, and generally from a foot to eighteen inches in length. The fruit itself is found indifferently in all parts of the branches, and is in shape rather elliptical than round; it is covered with a rough rind, and is usually seven or eight inches long, each growing singly, and not in clusters. The fruit is fittest to be used when full grown but still green; when, being roasted in the embers, it has some distant resemblance to the taste of an artichoke's bottom, and is, like that, of a soft and spungy texture. As it ripens, it becomes softer, turns yellow, and contracts a luscious taste and an agreeable smell, not unlike a ripe peach; but it is then esteemed unwholsome, and is said to produce fluxes. According to Mr. Dampier, it is as large as a two-penny loaf in his time, and the inside soft, tender, white, and crummy, like bread; and, if eaten in twenty-

The Nutmeg-Tree

twenty-four hours after it is plucked, has a ſweet and agreeable taſte, and is in ſeaſon eight months in the year. Commodore Anſon's people conſtantly eat it, during their ſtay upon the iſland, inſtead of bread; and it was ſo univerſally preferred to it, that no ſhip's bread was expended all the while they ſtaid there.

It is theſe iſlands, and ſome of them only, that furniſh us with nutmegs cinnamon, cloves, &c. which ſpices are juſtly eſteemed for their ſalutary heat and aromatic odour, and ſeem in the firſt place to deſerve our attention. A vulgar error long prevailed, and is perhaps ſtill entertained by ſome people, that nutmegs, mace, cloves, and cinnamon, were all produced by one and the ſame tree; but this is contradicted by all our lateſt and beſt accounts, the opinion being only true with reſpect to the mace and nutmegs. The nutmeg-tree grows ſpontaneouſly in ſome ſmall iſlands called the Banda iſlands, and eſpecially in that which particularly bears the name of Banda, formerly poſſeſſed by the Engliſh, but now by the Dutch, who have monopolized the ſpice trade to themſelves, and that by ſuch methods of cruelty (witneſs their maſſacre of the Engliſh at Amboyna*) as is not our buſineſs to relate. And ſuch prodigious quantities of nutmegs are produced in theſe iſlands, that we are credibly informed the Dutch

* This barbarous affair happened in the year 1623, when the chief of the Engliſh factory at Amboyna were condemned and executed for a pretended conſpiracy againſt the Dutch, upon evidence of thoſe whoſe confeſſions had been extorted from them by various tortures. After this they ſeized the Engliſh goods at Amboyna and other iſlands to a great value, and have ever ſince ſupplied all Europe with ſpices.

ſometimes

ſometimes burn vaſt heaps upon the ſpot, rather than bring them to Europe, and over-ſtock the markets.

THE nutmeg-tree very much reſembles a pear-tree, but the leaves are like thoſe of the peach, except being ſmaller; it has an aſh-coloured bark with a ſpungy wood. The bloſſoms are yellowiſh, with five leaves, not unlike thoſe of cherries; to theſe ſucceed the fruit, hanging to a long pedicle. It is ſomewhat like a walnut, and the kernel, or nutmeg, is covered with three coats; the firſt of which is fleſhy, ſoft, and juicy, about as thick as a man's finger, but when ripe, gapes ſpontaneouſly, and falls off. Under this, is another covering of an oily, clammy conſiſtence, but thin, and of an agreeable, fragrant ſmell, and an acrid, aromatic taſte. This is of a ſaffron colour, and is what we call mace. There is alſo a hard, woody, thin, brittle ſhell, of a duſky, reddiſh colour, and in this is contained the nutmeg; which is at firſt ſoft. On gathering them, they throw them into quicklime, for otherwiſe worms would breed and deſtroy them; and then ſuffer them to dry

THERE are ſeveral iſlands in the neighbourhood of Banda, in which nutmegs would grow, if the Dutch did not take care to have them deſtroyed annually. This may at firſt appear ſomewhat extraordinary, ſince their being once thoroughly rooted out, one would imagine, would prevent their growing again; but this difficulty is eaſily ſolved, when it is known that the birds carry them annually into all theſe iſlands, whence the Dutch ſtile them the gardeners of the ſpice-trees. *Tavernier* ſays, that, when the fruit is ripe, certain birds devour it whole, but are forced to throw it up again, before it be digeſted; and that the nutmeg thus beſmeared with the viſcous matter, takes root where it falls, and produces a tree which would

would never thrive, was it planted*; but this laſt obſervation is doubtleſs a miſtake. Thevenot ſays, that the birds, having picked it off the green huſk, ſwallow the nuts, which, after ſome the time, they void in the ordinary way undigeſted.

MR. RAY tells us, that ſeveral ſorts of birds devour the nutmegs, but chiefly a ſmall white kind of pigeons; and that, being voided whole, they take root the ſooner, as having been previouſly macerated in the ſtomach of the animal. He adds however, that the fruit of the trees produced in this manner is much worſe than that of others, and that the natives take no notice of it except for the mace, which they uſe to adulterate that which is better.

AS to the medicinal qualities of nutmegs, they are heating, drying, ſomewhat aſtringent, and ſtrengthen the head and ſtomach. They diſcuſs flatulencies, help digeſtion, ſweeten the breath, are excellent in faintings and palpitations of the heart, reſtrain diarrhœas, and ſtop vomitings. We have ſome nutmegs brought to us preſerved, being comfited green where they grow; and theſe

* Pliny, Theophraſtus, and other ancient naturaliſts generally agree, that the miſletoe, which grows upon the oak, white thorn, and other trees, is propagated by birds ſwallowing the berries, and voiding them again on the branches where they happen to perch, the ſeeds being fertilized by paſſing through their bodies. Mr. Bradley endeavours to refute the popular opinion of the ancients, that the ſeeds of the miſletoe would not vegeate without this preparation; and ſuppoſes that their unſucceſsful endeavours to propagate it in the earth have led them into the error. He aſſerts that it may be propagated by ſeed on any tree whatever, and that very eaſily; for, if about chriſtmas, when the berries are full ripe, we apply them on the ſmooth bark of a tree, their viſcidity will make them ſtick; and, provided they are not devoured by birds, we may expect a new plant the following year without any farther trouble.

are alſo reckoned ſtomachic, and very ſerviceable in flatulent diſorders, but, if eaten to exceſs, are ſaid to have a narcotic quality, and to produce a ſort of intoxication. The ſame virtues with thoſe of nutmegs are aſcribed to mace, but, as it's parts are more minute, it is thought to operate more effectually, and to be poſſeſſed of a more penetrating quality. The genuine oil of mace by expreſſion, made in the iſlands while the mace is recent, is brought to us in bottles, but is a very rare commodity; that commonly ſold in the ſhops, being a factitious kind, by no means equal to the true ſort in efficacy.

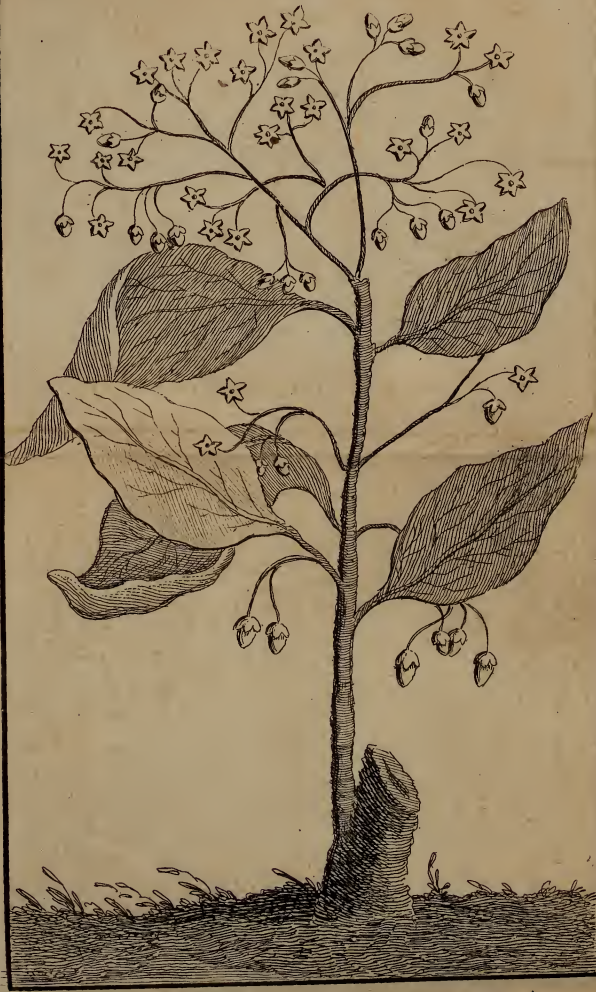
THE clove-tree was formerly very common in moſt of the Molucca iſlands, and all nations furniſhed themſelves with cloves at liberty; but the Dutch, to render themſelves ſole maſters of that merchandiſe, have found means to deſtroy all the clove-trees except thoſe of Ternate and a few other ſmall iſlands in their own poſſeſſion. The fruit of this tree falling on the ground takes root, and thus it is multiplied without any culture. The tree reſembles a laurel, but it's leaves are narrower; and it is ſaid that no graſs will grow under it's branches, it's own root attracting all the humidity of the ſoil. From the age of eight years to a hundred it bears fruit, which is gathered once a year; though ſome ſay they crop the buds one year, to make them thrive the better next; and ſo gather the fruit only every ſecond year. When the clove firſt begins to appear, it is of a whitiſh green colour, but grows brown as it ripens; nor is there any preparation neceſſary in order to render it ſuch as it comes to us, but to dry it in the ſun, notwithſtanding what ſome authors talk of ſteeping it in ſea-water to preſerve it from worms. Towards the head it ſeparates

into

Vol. IV. P. 194.

The Clove-Tree

The Cinnamon-Tree



into four parts, whose apices meeting at the top form a kind of crown, somewhat in the antique manner. — Cloves are very heating and drying, strengthen a weak stomach, expel wind, prevent fainting, stop vomiting, and are good in malignant distempers. There is also an oil drawn from cloves by distillation, which is reckoned a sovereign remedy for the tooth-ach, and is likewise much used by perfumers.

THE fine spicewe call cinnamon is the bark of a tree growing plentifully in Ceylon, and is perhaps peculiar to that island; at least the best sort is brought from thence, and the commerce thereof monopolized, like the other spices, by the Dutch East-India company. By an account given us in the Philosophical Transactions there appear to be several species of the cinnamon-tree, though some are not easily distinguished from each other. That which yields the true and best cinnamon, has leaves like those of the lemon-tree, bears white fragrant blossoms, and a yellowish fruit not unlike an acorn, which has neither the smell nor taste of the bark, but yields when boiled an oily juice, that hardens and becomes like tallow, and is not only used by the Ceyloneſe both internally and externally for several disorders, but also for candles, which it is said are only allowed to be burnt in the king's palace. The young leaves of this tree are red, and, if rubbed between the hands, yield an odour more like that of cloves than that of cinnamon. These, by distillation, afford an oil of a bitterish taste, resembling oil of cloves to which a little oil of cinnamon has been added. This is called oleum malabathri, and is celebrated as an instantaneous remedy for pains of the head and stomach, and some other disorders.

THE inhabitants of this iſland extract from the root of the cinnamon-tree, by inciſion, a liquor that ſmells like camphire, and gradually coagulates into white grains. This ſpecies of camphire is alſo obtained by diſtillation from the bark of the root dried, bruiſed, and immerſed in water. The phyſicians of Ceylon uſe this diſtilled camphirated liquor with ſucceſs, exhibiting a ſpoonful of it at proper intervals, as a ſudorific, in continual and malignant fevers.

THE cinnamon-tree muſt grow a certain number of years before the bark is fit to be taken off; but the beſt ſort ripens two or three years ſooner than the other trees, which is owing to the difference of the ſoil they grow in. Thoſe, for inſtance, where the ſoil is a fine white ſand, will be ready in five years time, whereas thoſe that ſtand in a wet ſlimy ſoil muſt have ſeven or eight years before they are ripe enough. Thoſe trees likewiſe that grow in the ſhade of others, whereby the ſun is kept from their roots, are later on that account; and for the ſame reaſon the bark of ſuch trees has not that agreeable taſte which is obſerved in thoſe that grow in a white ſandy ſoil, where, with a little wet, they ſtand expoſed to the ſun. It is rather of a bitteriſh taſte, ſomewhat aſtringent, and ſmells like camphire; for by the heat of the ſun the camphire is rendered ſo thin and volatile, that it riſes up and mixes with the juices of the tree, where it undergoes a ſmall fermentation; and then, riſing ſtill higher between the ſubſtance of the wood and the thin inner membrane of the bark, it is at laſt ſo effectually diffuſed through the branches and leaves, that the leaſt trace of it is not to be perceived. Mean time the thin glutinous membrane between the bark and the ſubſtance of the wood attracts the pureſt, ſweeteſt, and moſt agreeable

able particles of the juice, leaving the thick and groſs ones, which are puſhed forwards, and ſerve to nouriſh the branches, leaves, and fruit.

To confirm the truth of what has been ſaid, our author obſerves, that, if the bark be freſh taken off, the juice remaining in the tree has a bitteriſh taſte, not unlike that of cloves; but on the contrary, if you taſte the inner membrane of the bark, when juſt taken off, you will find it moſt exquiſitely ſweet and pleaſant, whereas the outer part of the bark differs very little in taſte from that of the common trees, which ſhews that all it's ſweetneſs is owing to the inner membrane. When the bark is laid in the ſun in order to be dried and convolved, this oily ſweetneſs of the inner membrane diffuſes itſelf through the outer part of it, (which has been ſtripped, while ſtill upon the tree, of it's outermoſt greeniſh coat) and impregnates it ſo ſtrongly, as to make it a commodity which is coveted and admired by all the world for it's aromatic taſte and fragrancy.

The cinnamon may be taken from trees that have ſtood fourteen, fifteen, or ſixteen years after coming to maturity; but then they begin to loſe their agreeable ſweetneſs, and the bark has more of the taſte of camphire; beſides, it is then grown ſo thick, that, when it is laid in the ſun, it does not ſhrink and wind itſelf up, but remains flat. And now our author thinks it worth inquiring, conſidering the vaſt quantities of cinnamon that have been exported from the iſland of Ceylon, how ſuch numbers of trees fit to be barked ſtill remain; for it is abſolutely falſe, that, when the bark has been ſtripped from the tree, it grows again in four or four five years, as ſome have reported. The truth of the matter is, that after the trees have been barked new ſhoots ariſe from the roots,

which in six or seven years are fit to be barked; and hence it appears how instrumental the old roots are to the plenty and growth of cinnamon. The tree is propagated by the fall of the fruit, and it's being scattered by a sort of wild pigeons, as we have observed of the nutmegs. These birds, when they fetch food for their young ones, disperse the fruit over several parts of the island, which occasions the rise of many thousands of young trees, which grow on the sides of the roads, and for woods and groves in several places.

IN the shops, that cinnamon is generally accounted best that is of a yellowish red externally, and internally of a somewhat darker colour; and it is to be chosen smooth, easily broken, of a fragrant scent, and pungent taste. That which is small is preferable to the large kind, and the long pipes are more valuable than the short ones. It is sometimes adulterated with the bark of the caper-bush, tamarisk, or the cassia lignea; but this piece of fraud is easily detected. As to it's virtues, though it be an excellent cordial, and highly beneficial in palpitations of the heart, yet by being too often used it has been found to bring on the same disorder; in which case acids are the most effectual means of relief.

TO the account we have given of the cinnamon-tree we shall only add, that the cassia lignea just mentioned, is a species of it produced in Malabar, Java, Sumatra, and the Philippine islands, and is brought into Europe in small pipes like the Ceylonian cinnamon, but is of a darker and more rusty colour, of a more compleat texture, and more languid smell. That sort of this bark is reckoned best which is of a purplish colour, easily broken, fragrant, and of a sweetish taste, because then it abounds with a volatile oleous salt, sheathed in a mucilaginous

mucilaginous ſubſtance; and is therefore proper when the intention is only moderately to heat, open, reſolve, and ſtrengthen.

HAVING mentioned that camphire is obtained from the root of the cinnamon-tree, it is proper to obſerve, that it does not come from that tree only, but from another which grows very frequent in the iſland of Borneo. It is a ſubſtance of a very ſingular nature, diſtilling from the tree in the manner of a gum, and thickening into little grains of different figures and ſizes. It is white, tranſparent, friable, of an acrid and ſomewhat bitteriſh taſte, of a penetrating ſmell, and to ſome people greatly offenſive. We are told that camphire is red at firſt, but whitened either by the ſun or by fire; and indeed we have very little of the raw natural camphire among us, the Dutch taking care it ſhall come refined by ſublimation, and prepared to our hands. Camphire flames in an open fire, and, when kindled, burns till it be totally conſumed; it likewiſe burns in water, and ſends forth a thick dark ſmoke, which produces a blackiſh ſoot. When put into a pure glaſs veſſel, with an alembic fitted to it, it melts by the force of fire, aſcends into the alembic, and there concretes again into the form of camphire, without any alteration. When put upon hot bread, if it becomes moiſt, it is a ſign of it's being good and genuine; but, if it becomes dry, it is a proof of it's being bad and ſpurious. As camphire conſiſts of highly volatile parts, it is very penetrating, diſcutient, reſolvent, corroborating, and proper to reſiſt putrefaction. It is the moſt efficacious diaphoretic known, it's great ſubtilty diffuſing it through the ſubſtance of the parts almoſt as ſoon as the warmth of the ſtomach has ſet it in motion. In the courts of the Eaſtern princes it is burnt, together with

wax, to illumine the night; and the Indians frequently mix it with acrid and aromatic ſubſtances, of which they form troches to be chewed in order to promote a diſcharge of the ſaliva. It is of ſingular efficacy in inflammations whether internal or external, and has been found of uſe againſt fevers when worn as an amulet. Some put a grain or two of camphire into a rotten tooth, and even uſe it as a gargariſm in the tooth-ach.

IF camphire be boiled in aqua vitæ-in a cloſe place till the whole be evaporated, and then a lighted torch or candle be introduced, the air will immediately catch fire and appear all in a flame, without doing any damage either to the place or the ſpectators.

THE tree that produces ſago grows common enough in the Molucca iſlands, and is a very uſeful one to the natives on ſeveral accounts. When a tree is felled, they cleave it in two in the middle, and dig out the pith, which is eatable even when it comes freſh out of the tree; but to make bread of it they pound it in a mortar till it is reduced to a powder ſomewhat like flour. This done, they ſift it in a ſieve made of the bark of the ſame tree, and pour water upon it to ſeparate the fine part of the powder from the woody veins wherewith the pith abounds. The flour thus filtrated they call ſagou, which they make into paſte, and bake it in earthen ovens; and this they do with very great expedition. The pith of this tree being well beaten in a mortar with water forms a kind of emulſion, the ſediment whereof dried is the ſago of the ſhops. It is much uſed amongſt us, being a very kindly and nouriſhing food, never fermenting in the ſtomach, and very proper in hectic fevers.—We are told that from the ſame tree they draw a liquor as pleaſant as wine; that the leaves,

leaves, when young, are covered with a kind of cotton whereof they make their cloth; and that, when they grow older, they ſerve to thatch their houſes.

WHAT we call dragon's-blood is a reſinous ſubſtance iſſuing from a large tree which grows in Borneo and ſome other iſlands in the Indian ocean, as well as in Africa and America. This gum has it's name from it's reddiſh colour, and the tree itſelf is called draco arbor, or the dragon-tree, by our botaniſts, ſome of whom talk of the figure of a dragon finely repreſented under the rind of the fruit of the tree; but this is a mere fiction*. The gum is eaſily melted in the fire, and flames when thrown into it, but is not diſſolved in any liquor without difficulty. It is a powerful drier and aſtringent, and is uſed to ſtop hæmorrhages, conglutinate wounds, and faſten looſe teeth.—There is alſo a counterfeit ſort of dragon's-blood made of the gum of the cherry or almond-tree, diſſolved and boiled in a tincture of Braſil wood; but this is only applied externally in ſome diſeaſes of horſes.

THE mangoſtan is a fruit of the pomiferous kind, and originally a native of the Molucca iſlands, from whence it has of late years been tranſplanted to Java, where it thrives very well, and is at preſent looked upon at Batavia as the moſt proper for adorning a garden, and affording an agreeable

* The ancients had a notion, that the dragon fighting with the elephant ſucked all it's blood through it's ears and eyes; that the elephant falling down dead cruſhed the dragon; and that from their blood, thus mixed on the ground, aroſe what they called dragon's-blood, which they held in high eſteem. This is the account given by Solinus, Pliny, and others after them; but the reader need not be told that the whole is fabulous.

ſhade. It is of a moderate ſize, ſeldom growing above ſixteen or eighteen feet high; and it's ſtem runs up ſtraight to the top of it's tuft, which is regular, in the form of an oblong cone, compoſed of ſeveral branches and twigs ſpreading themſelves equally on all ſides, without leaving any vacancy. The ſtem at the bottom is eight or ten inches in diameter, gradually diminiſhing to the top; and the wood is white while the tree is growing, but browniſh when felled and dry. It's bark is tender, of a dark grey colour, and full of cracks up the ſtem, but on the twigs it is more green and even. The branches grow by pairs or ſtories, which croſs each other obliquely, and not at right angles. Thoſe at the bottom of the tuft are five or ſix feet long, the others ſhorter as they come near the top. The twigs grow on the branches in the ſame order as thoſe on the ſtem, that is, oppoſite to each other, and always are leſs and leſs towards their extremity. The leaves alſo grow in the ſame manner, and are ſmooth like thoſe of the laurel, of a ſhining green on the upper ſide, and of an olive-colour on the back, pointed at the ends; and the largeſt of them are eight or nine inches long, but for the generality ſix or ſeven, and their breadth always nearly equal to half their length.

THE flower this tree bears is about two inches in diameter, pretty much reſembling a ſingle roſe, being compoſed of four petala almoſt round, but a little pointed, and ſomewhat hollowed into the ſhape of a ſpoon. The fruit is round, of the ſize of a middling orange; but in this it varies, from an inch and a half to two and a half in diameter. It's top is covered with a ſort of cap in the ſhape of a roſe, or a ſtar with the rays ſquared off, which rays are commonly ſix or ſeven in number, ſeldom five or

eight,

eight, and, being thus squared, form together a kind of polygon. The body of the fruit is contained in a thick rind or shell, somewhat like that of a pomegranate, but softer and more juicy. The colour of this case on the outside is a dark brown purple, but the inside is of a rose-colour, and it's juice is purple. It has an astringent taste, as that of a pomegranate has; nor does it stick to the parts of the fruit it incloses, which is furrowed and divided into segments, much like those of an orange, but of an unequal size, and not adhering to one another. The number of these segments is always equal to that of the rays above-mentioned; and the fewer there are, the larger. They are white, clear, fleshy, membranous, full of juice, and have a mixed taste of grapes and strawberries. Each of the largest segments incloses a seed of the figure and size of an almond stripped of it's shell, which, as to consistence and colour very much resembles a chesnut.

TRAVELLERS in general, who speak of this fruit, bestow great encomiums upon it; and Dr. Garcin thinks it surprising, that the most delicious fruit of the Indies, and which yields to none in Europe, should be hitherto so little known or regarded: But that gentleman, having often eaten of it, and found it as excellent as it is reputed where it grows, resolved to examine it's genus, settle it's characters, and give a description of it which might make it better known to botanists and other curious persons; and from his account we have made this extract.—Our author adds, that one may eat a great deal of this fruit without any inconvenience, and allow it even to sick people, being very wholsome, refreshing, and more cordial than the strawberry. It's shell has the same virtue with that of the pomegranate; and at Batavia they make

an infusion and a tincture of it against loosenesses, and chiefly against dysenteries: But the wood of the tree is fit for nothing but fuel.

THERE remain yet several other trees and plants, the produce of the Oriental islands, which are so remarkable as to deserve our observation, particularly the talipot in the island of Ceylon. This tree grows to a great height, having no branches on it's trunk, but leaves on the top so large that one of them will shelter fifteen or twenty men. They fold up like a fan, and, when dry, are strong, light, and pliable, insomuch that they are used for tents and umbrella's; that the natives write upon them instead of paper. The pith likewise, when beat in a mortar, makes tolerable bread, which the Ceyloneſe eat in a time of scarcity. It is said they do not build their houses near these trees, the blossoms having an offensive smell.

IN Ceylon there likewise grows a tree called kettule, which yields a pleasant wholsome liquor*, whereof the natives make a pretty good sugar.

They

* It is an admirable provision, as Dr. Derham observes, made by the wise Creator for some countries subject to drought, that, when the waters every-where fail, there are vegetables which contain moisture enough not only to supply their own vegetation and wants, but afford drink also both to man and other creatures in their great extremities. Thus the wild pine, according to Dampier, has leaves that will hold a pint and half or a quart of rain water, which he says he has many times let out of the leaf with his knife, and catched in his hat, to his very great relief. And Navarette tells us of a tree called the bejuco, which twines about other trees, with it's point hanging downwards; and that travellers cut off the point of it, from whence immediately issues a stream of water, as clear as crystal, enough for six or eight men, and to spare. I have drank of this liquor, says he, to my satisfaction, finding it cool and sweet. It is the common relief of herdsmen on

They make ropes of it's leaves; which, like thoſe of the betel-tree, are faſtened to a hard ſkin full of very ſtrong fibres. The buds have the taſte of almonds, and the wood is ſo hard that it ſerves for peſtles to pound rice. One particular told concerning it is very wonderful, viz. that, while it is growing, it ſheds it's leaves, but ſheds none for many years after it is come to full maturity.

THE orula bears a fruit like an olive, which is uſed for purging, and makes ink by being bruiſed and ſteeped in water. If laid upon iron, it clears it from ruſt in a night's time.—There is alſo a tree called jackes, which bears a nut like a cheſnut, whoſe kernels are uſed inſtead of rice when it is ſcarce; and the tree yields a thick glutinous ſubſtance, which the boys uſe for bird-lime, and which taſtes like eggs when mixed with rice-flour.

RATTANS and large canes grow plentifully in Ceylon, running like vines along the ground, or up high trees, and bearing a fruit like bunches of grapes, covered with prickly ſhells, which fall off when ripe. Within theſe there is a ſcaly huſk incloſing a whitiſh kernel, of which the natives make a ſouriſh pottage, agreeable enough in that hot climate.

THEY have five different kinds of rice, diſtinguiſhed by their ſeaſons of maturity, all which except one, require a watery ſoil. When the rice is gathered, the women carry it to a pit, where it is trod out by buffaloes; after which it is ſeparated from the huſks by being pounded in a mortar; but the beſt ſort muſt be boiled in the huſks, or it breaks to pieces.

---

on the mountains when they are thirſty.—Accounts of the like nature are given us by Sir Hans Sloane, of which we ſhall take farther notice when we come to ſpeak of Jamaica.

BESIDES

BESIDES rice they have several sorts of corn, of which they make bread and oil; the most remarkable whereof is a grain called tanna, said to multiply a thousand for one, so that it is sown only in small quantities.

WE shall only add to this article, that Ceylon, Sumatra, Java, Borneo, and other Indian islands, afford several kinds of pepper in great plenty; but we refer the reader to the account already given of that aromatic fruit*, and proceed to the animal kingdom.

ANIMALS.

IN the island of Ceylon are plenty of buffaloes, elephants, monkies of various kinds, bears, tygers, and jackals. The island is particularly famous for it's elephants, on account of their prodigious bulk, and the beauty of their ivory; and they are so numerous, as to do incredible damage to the husbandmen, by breaking their trees, and eating and trampling down their corn. Hence the country people are obliged to watch those fields that lie near the woods every night; and they are not secure of their corn, even when it is placed in their yards. It is with great difficulty that, with lighted torches, and making a great noise, they can frighten them away. Their tygers and bears are far less troublesome; for they do no damage to the corn, and seldom attack people without provocation; but these elephants, when tamed, are said to be remarkable for their docility.

* See p. 20, 21, of this volume.

THE

THE Ceyloneſe not only make uſe of fire, to drive away the wild beaſts, but alſo to take deer, elks, &c. with which their woods abound. Two men go into a wood in the night-time, one of whom carries on his head an earthen veſſel, wherein a fire is made of ſticks and a kind of roſin; and in one hand he has a ſtaff, whereon eight bells are faſtened, the more harmonious, the better. The other man goes behind with a ſpear in his hand; and whilſt the deer ſtands gazing at the light, and attentive to the muſic of the bells, the ſpearman advances, and runs him through the body.—They have another method of killing birds, deer or other game, which is practiſed by thoſe who are maſters of a gun: viz. They make a frame large enough to ſcreen their body, which they cover with the boughs of trees, and, advancing behind this frame, they eaſily get near enough to fire at their mark, the birds or deer being not affrighted, as ſeeing nothing but the green branches.

BESIDES elephants, tigers, and other quadrupeds already mentioned, there is a ſort of bear in Ceylon, called talgoi, or the ant-bear from his eating certain ants called waia, of which there are great numbers in that iſland. In order to deceive them, the bear lies down near the little neſts they build, as if he was dead, lolling out his tongue as far as he can, upon which multitudes of ants preſently fix themſelves, and the bear draws in his tongue and ſwallows them; and then, putting out his tongue again, he ſoon catches more, continuing ſo to do till he has ſatisfied his hunger. The neſts or habitations of theſe ants are very curiouſly formed, according to the accounts of travellers, being built in little hills, and conſiſting of vaults and arches

of

of the fineſt clay, and ſo ſtrong as not to be eaſily demoliſhed*.

THIS

* We have heretofore given a large account of the ſagacity, induſtry, and œconomy of the bee; and, having mentioned the ant in this place, it leads us to make ſome obſervations on that little inſect, which the ſcripture calls *exceeding wiſe*, (Prov. xxx. 24.) and to which Solomon ſends the ſluggard to learn wiſdom, foreſight, care, and diligence: *Go to the ant, thou ſluggard, conſider her ways, and be wiſe; which having no guide, overſeer, or ruler, provideth her meat in the ſummer, and gathereth her food in the harveſt*, Prov. vi. 6, 7, 8. —To view theſe buſy animals (as an ingenious author obſerves) is really an inſtructive ſight; for we may conſider them as a little people united, like the bees, in a republic governed by it's own laws and politics. They have uſually a kind of oblong city, divided into various ſtreets, which terminate at different magazines. Some ſpecies of ants ſtrengthen the earth, and prevent it's falling in, by incruſting it with a ſurface of glutinous matter; but thoſe we commonly meet with make their habitations by amaſſing ſeveral ſplinters of wood, which they uſe as rafters to ſuſtain the roof, and acroſs theſe they lay another rank of ſplinters, covering them with dry ruſhes, graſs, and little ſtraws, which they raiſe with a double ſlope, to turn off the water from their magazines, whereof ſome are appropriated to receive their proviſions, and in others they depoſit their eggs, and the worms that proceed from them.—As to their proviſions, they are indefatigable in bringing them home; and it is very pretty to ſee one of them loaded with the kernel of ſome fruit, another bending under the weight of a dead gnat, or ſeveral of them at work on the carcaſs of a larger fly or other inſect. What cannot be removed they eat on the ſpot, and carry to their magazines what is capable of being preſerved. They ſometimes carry, and ſomes puſh before them, grains of wheat or barley much larger than themſelves; and we are told that they gnaw off the point of the grain, to prevent it's ſhooting up by the moiſture of the cells in which it is depoſited. Some pretend to have ſeen their granaries, and we ſhall not abſolutely deny the fact; but it is probable their aurelias, commonly called ants eggs, have been miſtaken for grains of corn.—After the ants have paſſed the ſummer in a conſtant employment and fatigue, they ſhut themſelves up in winter, and enjoy the fruits of their labours;

but

THIS iſland abounds with a variety of fowl, particularly wild peacocks, and green parrots, which are very numerous. A ſpecies of the latter called the macaw, is of the ſize and colour of a black-bird; and ſpeaks very plain when taught, as does alſo another ſpecies, which is of a very beautiful gold colour.

ONE

---

but there is reaſon to believe they eat little in that ſeaſon, and are either benumbed or buried in ſleep, like many other inſects. Their induſtry therefore in ſtoring up proviſions does not ſeem ſo much intended to guard againſt the winter, as to provide a neceſſary ſuſtenence for their offspring; whom they nouriſh, as ſoon as they quit the egg, with wonderful aſſiduity, the care of their little progeny being eſteemed a matter of public concern.

Dr. King, who was very curious in examining the generation of ants, imagines their true eggs to be that fine white ſubſtance, like grains of ſugar or ſalt, which is obſervable upon opening an ant-hill; for viewing a bit of it with a good microſcope, and opening it with the point of a needle, he diſcerned many white appearances in the diſtinct membranes, reſembling little eggs, and as clear as a fiſh's bladder; and what confirms his conjecture is, that he found the very ſame ſubſtance in the bodies of the ants themſelves. This ſubſtance, when ſcattered, the ants diligently gather into a heap, and lie upon it in multitudes, perhaps (as Dr. Derham ſuppoſes) by way of incubation. Be this as it will, when the young ants leave the egg, they are little worms, no longer than common grains of ſand, without any ſenſible motion, but, after they have received their nouriſhment for ſome time, which is diſtributed to them in equal proportions, they ſpin a thread, and wrap themſelves up in a whitiſh web, in which ſtate they are vulgarly taken for eggs, but are in reality aurelia's or nymphs, that are to be transformed into a new progeny. And now it is very diverting, as well as ſurpriſing, to ſee with what affection and care the parent-ants carry about theſe aurelias; how they expoſe themſelves to the greateſt dangers rather than forſake them; how they remove them from place to place in their little hills, for the benefit of proper warmth or moiſture, ſometimes bringing them to the ſurface of the earth, or carrying them down into the ground, according as

ONE of the fineſt birds of the country is of the ſize of a ſparrow, and as white as ſnow, except it's head, which is black, with a plume of feathers ſtanding upright; and the tail is a foot long. There are others of a deep yellow, but in every other reſpect like the former; neither of them have any muſical notes.

IN Ceylon they have a black-bird called carlos, as big as a ſwan, which ſeldom lights on the ground, but perches on high trees. It has ſhort legs, a large head, and a long bill, but crooked, like that of a hawk. It has white ſpots on each ſide of the head, a white creſt on the top of it, and quacks like a duck. There is likewiſe a black water fowl, as big as a duck, which lives on fiſh, and dives a great while under water.

THERE are various kinds of ſerpents in Ceylon, ſome are very large and dangerous; but there are two ſorts that are not thought venomous, which the Ceyloneſe will not deſtroy. The firſt is of a

---

as the ſeaſon is warm or cold, dry or rainy: When the weather is ſerene, they bring them up towards the top of the hill in the morning, commonly on the ſouth ſide; but, on the approach of night, or cold, or the appearance of ſhowers, they deſcend with their beloved charge to ſuch a depth, that (as Dr. King obſerved) you may dig a foot or more before you can find them.—To this extraordinary tenderneſs and care of their young we might add other particulars of the conduct of theſe little animals, ſuch as their cuſtom of removing the dead from their habitations, and their readineſs to aſſiſt each other in carrying burdens or invading their enemies. We might alſo enlarge on their nice formation, and on the wiſdom of providence in giving wings (as is reported) to the males at a certain age, to facilitate their acquiſition of food, which are denied to the females, that they may be more at home, and attentive to domeſtic cares. But theſe things we leave to be inquired into by thoſe who have leiſure and curioſity to ſtudy the wonderful works of nature.

bluiſh

The Hooded Serpent.

bluiſh colour, about two yards and a half long, and an inch in diameter. He frequently comes into their houſes in queſt of rats, creeping into their neſts, and deſtroying them, they being his principal food. The other ſort is about a yard long, half an inch in diameter, and of a green colour, like the leaves of the tree up which he climbs, and there lies motionleſs, waiting for birds to perch near him, on which he ſuddenly ſeizes.

A SERPENT of Ceylon, called pimberah, is as thick as a man, and of a proportionable length. It has a terrible aſpect, on account of it's two large eyes placed on the top of the head next the ſides. The jaws are armed with teeth cut like a ſaw, and the mouth has a border in the form of a ſhell. The forehead is covered with grey and aſh-coloured ſcales, adorned with large beautiful ſpots, and furrowed acroſs with three ſtreaks, in the ſhape of ſo many croſſes. The ſcales in the upper part of the body are reddiſh, ſhaded with large magnificent ſpots of a dark brown, of which ſome are roundiſh, and others oblong, ranged in a fine proportion from the top of the head to the end of the tail, which is ſlender. This variegation is accompanied on the ſides with other large triangular black ſpots. Underneath, towards the bottom of the belly, there is a third row of ſpots, which are very ſmall, and extend near the tranſverſe ſcales, which are very large, of an aſh-colour, and diſpoſed in a beautiful order.

BUT, of all the ſerpents which are found in the Indian iſlands, or in any other part of the world, perhaps none is more remarkable than the cucullated or hooded ſerpent, ſo called from a kind of hood or cap that covers it's head. This ſerpent, according to the relation of M. De la Cote, who found one as he was hunting in a little iſland near Batavia, is as thick as a man's arm,

arm, and about eight feet long, being of the same species that Tavernier mentions in his Travels. We have caused the figure of this frightful creature to be engraved, which will give the reader a better idea of it, than he could form from any verbal description.

To come to the feathered tribe; the birds of paradise, which are chiefly found in the Molucca islands, have been much talked of by naturalists, who have described several sorts of them, differing in size, shape, and colour. They have obtained the name we give them, not only from their beauty, but from a vulgar opinion of their dropping down from heaven, it not being known where they breed, whence they come, or whither they depart. The bird is but small, has a head like a swallow, with a bill somewhat longer, and the colours of it's feathers are extremely beautiful. Strange stories have been told concerning these birds, such as their wanting feet and legs; that they lived upon the celestial dew; that they kept continually upon the wing, and took no rest but on high in the air; that they were never taken alive, but when they fell down dead upon the ground, &c. all which things are now known to be false and fabulous, both by the accounts of travellers, and by the birds themselves having been brought to Europe.

In the island of Java they have great variety of animals, some of which have been already spoken of, and others will be described hereafter. Captain Hamilton says that their peacocks have all red bodies, but black wings and tails, and are so large that, when they take wing, they may be heard half a mile. He particularly takes notice of a remarkable creature, called Jackoa, which is like a lizard, and pisses at any thing that provokes it; and it's urine is of such a nature, that, if it fall upon

The Shark.

upon one's flesh, it blisters the skin, and, without immediate caustics or cutting out the part, it becomes absolutely incurable.

The island of Borneo, as well as Java, has a kind of little wild horses, besides various quadrupeds common to it with other parts of the Indies. There are likewise parrots and parroquets of all sorts; and in the evening the sky is almost darkened with a large kind of bats, which some travellers call flying cats, resembling a fox in colour, shape, and smell, and which we apprehend are the same with those already described from M. Thevenot. The wings of some of these bats, when extended, measure five or six feet from the tip of the one to that of the other.

In Sumatra they have plenty of wild hogs, which the Europeans often go out to shoot in the night-time; and what they call hog-deer, a creature about the size of a rabbet, that burrows in the woods, are also common in their markets. They have a head like a hog, are shanked and hoofed like deer, and their hocks are often tipped with silver for tobacco-stoppers. In this animal is found a sort of bitter bezoar, reckoned extremely valuable. There is likewise the finest breed of cocks in this island of any in those parts of the world, and the cockers (it is said) will often venture their whole estates on the issue of a battle.

Mr. Lockyer relates, that sharks are often sold in the markets of Achem, the capital of a kingdom in Sumatra; and he thinks the largest in the sea are found on the western coast of that island. The shark is generally looked upon as the boldest and most ravenous of all fishes. It's common length is from nine to fifteen feet, but some of them are said to be twenty feet and upwards. It has no scales, and the skin is rough, like sha-

green,

green, and very hard, whence the trunk and case-makers cover several sorts of boxes and cases with it; and the same use is made of the skins of other fishes. It is of a deep brown and somewhat greenish colour, whitening by degrees to the belly. Their flesh is rank, in proportion to their size, and at best affords but an indifferent repast: the fins only excepted, which though covered with a skin, hard enough to be used as a slate to write on, when jerked or dried in the sun, afford, when prepared according to the Chinese cookery, a very delicate dish. They cut them out in strips, or rather filaments, which, when seasoned in their manner, are stewed into a tender gristly substance, extremely well tasted, and is esteemed by them very strengthening. It has a long gullet, and in the belly of it are frequently found, half the body of a man, for it will follow a ship a long way in hopes of prey. Almost any thing will serve for a bait, but it is commonly too large to be mastered by a harpoon or fiz-gig. It requires a strong hook to hold it, and it no sooner touches the deck, than it makes the whole ship shake with the violent flounces of it's tail, capable of breaking a man's leg, yet it is presently subdued by a cut from an ax upon it, which instantly deprives the fish of all power, so that it is soon dispatched. This fish must, however, have been much more effectually the terror of the seas, had nature endowed it with an agility and disposition of parts, answerable to that of it's voracity, which is so especially assisted with a dreadful triple row of teeth, or, as some say, five or six rows as sharp as razors, the number of it's teeth being said to increase according to it's age. But, besides it's not being the swiftest swimmer, it's mouth, by being placed considerably within the projection of it's snout, towards the belly, obliges

obliges it to turn on it's back, or at leaſt ſideways, to ſnap at it's prey, which Mr. Groſe ſays, it does ſo heavily, that good ſwimmers will, with a knife, either for diverſion, or for the ſake of ſhewing their ſkill, attack it in it's own element, or oblige it to ſheer off.

THE reverend Mr. Hughes, in his Natural Hiſtory of Barbadoes, gives a very remarkable account of an engagement of this kind, which he juſtly conſiders as being as great an inſtance of diſintereſted friendſhip, and perſonal bravery, as any recorded in hiſtory. Some ſailors, having diſembarked the laſt part of their lading in that iſland, which was coals, thoſe who had been employed in that dirty work, ventured into the ſea to waſh themſelves, but had not been long there, before a perſon on board obſerved a large ſhark making towards them, and gave them notice of their danger; upon which they ſwam back, and all but one reached the boat; and him the ſhark overtook almoſt within reach of the oars, and, griping him by the ſmall of the back, his devouring jaws ſoon cut him aſunder, and as ſoon ſwallowed the lower part of his body; the remaining part was taken up, and carried on board, where his comrade was. The friendſhip between him and the deceaſed had long been diſtinguiſhed by a reciprocal diſcharge of all ſuch endearing offices as implied an union and ſympathy of ſouls. On his ſeeing the ſevered trunk of his friend, he was filled with an horror and emotion two great for words to expreſs. During this affecting ſcene, the inſatiable ſhark was obſerved traverſing the bloody ſurface, ſearching after the remainder of his prey: the reſt of the crew thought themſelves happy in being on board; he alone was unhappy at his not being within reach of the deſtroyer. Fired at the ſight,

and

and vowing that he would make the devourer disgorge, or be swallowed himself, he plunged into the deep, armed with a sharp pointed-knife. The shark no sooner saw him, but he made furiously towards him; both equally eager, the one for his prey, the other for revenge. The moment the shark opened his rapacious jaws, his adversary; dexterously diving, and grasping him with his left hand, somewhat below the upper fins, successfully employed his knife in his right hand, giving him repeated stabs in the belly. The enraged shark, after many unavailing efforts, finding himself overmatched in his own element, endeavoured to disengage himself, sometimes plunging to the bottom, then, mad with pain, rearing his uncouth form, now stained with his own streaming blood above the foaming waves. The crews of the surrounding vessels saw the unequal combat, uncertain from which of the combatants the streams of blood issued; till at length the shark, much weakened by the loss of blood, made towards the shore, and with him his conqueror; who, flushed with an assurance of victory, pushed his foe with redoubled ardour, and by the help of an ebbing tide, dragging him on shore, ripped up his bowels, and united and buried the severed body of his friend in one grave. Mr. Hughes observes, that this story is of so extraordinary a nature, that he would not have dared to insert it, had he not been authorized by the testimony of a very creditable gentleman, who was ready to confirm the truth of it by oath.

IN the Indian seas are found oysters of a surprizing bigness, a sufficient instance whereof are those mentioned by Mr. Strachan; who tells us, that about three leagues from Batavia he saw some of those shel-fish twelve inches in diameter, one of which shells grew till it was three feet broad

and

and a foot thick. After the fish was putrified he always observed a slime upon these shells, which lay only three or four feet under water.

We have now finished our survey of the Asiatic continent and it's islands, and it is time to proceed to the third part of our design, viz. to take a view of what is most curious and remarkable in Africa, so far as it is known to us, for to many of the inland parts of it we are intirely strangers.

PART III.

OF

AFRICA.

CHAP. I.

Of EGYPT.

THE vaſt tract of land call Africa, and reckoned, in order, the third part of the world according to the diviſion of geographers, is joined to the continent we have been ſurveying by the iſthmus of Suez, a ſmall neck of land which cuts off the communication between the Red-ſea and the Mediterranean. This laſt ſea divides it from Europe; and, being on all other parts ſurrounded by the Red-ſea and the main ocean, it may be looked upon as a huge peninſula, the middle regions whereof the ancients believed inacceſſible and uninhabitable by reaſon of their intolerable heat, as lying moſtly under the torrid zone; on which account, as well as the ſavageneſs of it's inhabitants, they have been little viſited by ſtrangers. And, though we are much better acquainted with Africa than the ancients were, yet our knowledge is chiefly confined to thoſe countries that lie along the coaſts, occaſioned by

by the difficulty of travelling over it's wide sandy deserts*, and amongst people savage in their nature, forbidding in their manners and language, and shy of all intercourse with foreign nations. What we have to do is to consult Dr. Pococke, Dr. Shaw, Mr. Norden, Mr. Moore, and other modern travellers, who have given us the best accounts of the curiosities of those countries, which fell under their observation; and we have chosen to begin with Egypt, not only as it is the nearest to Asia, but as it is the most celebrated, rich, and fertile part of Africa.

The INUNDATION, CATARACTS, &c. of the NILE.

IT seems proper to introduce our account of the curiosities of Egypt with some observations on this famous river, which has always been reckoned one of it's greatest wonders, and to which it's fertility and happiness is chiefly owing; for,

---

* One of the dangers of travelling in these wide extended wastes of sand is finely described in the tragedy of *Cato*:

So, where our wide Numidian *wastes extend,*
Sudden th' impetuous hurricanes descend,
Wheel through the air, in circling eddies play,
Tear up the sands, and sweep whole plains away.
The helpless traveller, with wild surprise,
Sees the dry desert all around him rise,
And, smother'd in the dusty whirl-wind, dies.

And yet even these miserable countries are not quite destitute of inhabitants, Providence having made man capable of living in most parts of the globe, by contriving his organs so as to conform themselves to the heat or cold, the moisture or dryness of the climate he is bred in. Thus the Laplandlers live with comfort near the frozen pole, and the Lybians are happy in their sultry deserts.

as it ſeldom rains in the inland parts of the country, and the ſoil is naturally dry and ſandy, if the lands were not annually watered by the overflowing of this river, Egypt, inſtead of the moſt fertile, would be one of the moſt barren regions in the world.

THE ſources or ſprings of the Nile were abſolutely unknown to the ancients, and baffled all their inquiries *; but our modern travellers, eſpecially the Portugueſe Miſſionaries, who claim the honour of the diſcovery, have found that they lie in Abyſſinia, or Ethiopia Proper, in the eleventh or twelfth degree of north latitude; and ſome authors, particularly Ludolphus, are of opinion that the Nile divides itſelf into two branches, one of which runs weſtward into the Atlantic ocean, and the other taking it's courſe northward through Egypt falls into the Mediterranean. Whether this be ſo or not, or whether the river Gambia be the weſtern branch called Niger, is not our buſineſs to inquire; but, the native country of the Nile being now diſcovered, the cauſe of it's inun-

* The diſcovery was in vain attempted by the Perſians, Greeks, and Romans, and ſuch ſtreſs did they lay upon it, and think it ſo honourable an enterprize, that Lucan makes Cæſar ſpeak to this effect:

Long has my curious ſoul, from early youth,
Toil'd in the noble ſearch of ſacred truth;
Yet ſtill no views have urg'd my ardour more,
Than Nile's remoteſt fountain to explore:
Then ſay, what ſource the famous ſtream ſupplies,
And bids it at revolving periods riſe;
Shew me that head from whence, ſince time begun,
The long ſucceſſion of his waves has run:
This let me know, and all my toils ſhall ceaſe,
The ſword be ſheath'd, and earth be bleſs'd with peace.

LETTER prefixed to Moore's TRAVELS.

dation

dation is manifeſt. To ſay nothing of the falſe conjectures that have been made about it, it is now univerſally allowed to be occaſioned by the great rains that fall in Ethiopia during the months of April and May, whereby the river is ſo ſwelled as to lay that country almoſt intirely under water, and afterwards Egypt in it's courſe towards the Mediterranean. Nor is this inundation peculiar to the Nile, but common to it with other rivers that have their riſe or courſe between the tropics, where heavy rains conſtantly fall at a certain ſeaſon of the year, which cauſe them to break through their ordinary bounds, and overflow the adjacent countries in their paſſage to the ſea, particularly in Siam, Bengal, and other parts of the Eaſt-Indies. The Northern winds, called Eteſian by the ancients, as blowing annually during a certain time, have been likewiſe ſuppoſed to contribute not a little to the overflowing of the Nile, by retarding it's courſe, and forcing the ſea againſt the mouth of the river; but, if theſe winds have any ſuch effect, it muſt be inconſiderable, as Ludolphus obſerves, though he allows they may render the increaſe ſomewhat unequal, as they blow weaker or ſtronger. Thus far indeed they may be a cauſe of the inundation, by driving the clouds formed by the vapours of the Mediterranean as far as the mountains of Ethiopia, where they condenſe and fall down in violent rains; but even this hypotheſis is not very plauſible.

THESE rains, however, being undoubtedly the cauſe of the Nile's overflowing, let us now conſider it's gradual riſe, and the beneficial effects it produces. The Nile begins to ſwell in the month of May, but it's increaſe is not conſiderable in the lower Egypt till about the 20th of June, nor is any public notice taken of it till the 28th of that month, at which time it is uſually riſen five or

six peeks, a Turkish measure equal to about five and twenty inches. Being come to this height, the public cryers proclaim the rise of the river in the city of Cairo, and continue to publish how much it increases every day, till it rises to sixteen peeks, at which time they make great rejoicings; and this usually happens at the latter end of July, or before the 20th of August; but the sooner it happens, they have the greater hopes of a plentiful season. If the Nile do not rise to sixteen peeks, the people pay no tribute that year to the grand Signior; but a still greater height is necessary to cause a general flood, and prepare the lands for cultivation. Eighteen peeks (Dr. Pococke informs us) are reckoned but an indifferent Nile, twenty a middling one, and twenty-two a very good one, beyond which it seldom rises. If it chance to rise higher than twenty-four, the inundation is said to be prejudicial, the waters in that case not retiring soon enough for the people to sow their corn; but we scarce know any instance of this nature. The Nile is usually at it's greatest height about the middle of September.

In order to know exactly the rise of the Nile, there is built, on a pleasant island opposite to old Cairo, a place called the Makias, in which is a famous pillar for measuring the Nile. It is fixed in a deep bason, the bottom of which is on a level with the bed of the river, the water passing through it. This pillar, which is placed under a dome, and crowned with a Corinthian capital, is divided into measures, for observing the rise of the waters; and from the court that leads to the house is a descent to the Nile, by steps, on which the common people believe that Moses was found after he had been exposed on the banks of the river.

As

As the river cannot of itself overflow the lands every-where in the necessary proportion, the people have cut, with incredible labour, a vast number of canals and trenches from one end of Egypt to the other, so that almost every town and village has it's canal, which is opened at the proper time, and conveys the water of the Nile to distant places. It is from these canals, where the banks of the Nile are high, that the lands are overflowed; but it is otherwise where they are low, particularly in the Delta, which is that part of Egypt that lies between the two mouths of the river*. Canals are carried along the higher grounds, that the water may have a fall from them to the lower parts; and from the great canals it is drawn out into small channels, and conveyed all over the country. It is likewise observable, that, as they have dikes or banks to keep the water out of the canals till the river is risen to a proper height to let it in, so in some of them they have contrivances to keep it in after the Nile is fallen, and also preserve it in certain lakes or ponds, from whence they can let it out upon their lands at pleasure.

The reader, however, is to understand, that some parts of the country lie too high to be watered by means of the canals, and several gardens and plantations require more refreshment than what they receive from the annual inundation;

* A little below Cairo the Nile divides itself into two large branches, which empty themselves into the Mediterranean at a great distance from each other, one near Rosetto, the other near Damiata; and thus the country between them is shaped something like the Greek letter Delta, from whence it's name: But as to the seven mouths of the Nile, much spoken of by the ancients, they are not to be found at present, time having made a great alteration in the face of the country.

and on this account they are obliged to raise water from the river, which is lodged in cisterns or reservoirs contrived for that purpose. This is generally done by the Persian wheel, a machine turned by oxen, which carries a rope hung with several vessels, that fill as it goes round, and empty themselves at top into the reservoir. They have another contrivance where the bank of the river is high; in which case they make a bason on the side of it, fixing near it an upright pole, and across the top of that another with an axle, at one end whereof hangs a great stone, and at the other a leathern bucket, which, being drawn down into the water by two men, is raised up again by the weight of the stone, the men directing it, and emptying it into the bason. The former of these machines is chiefly used in the lower parts of Egypt, the latter in the higher; for, as we advance up the river, the difficulty of raising the water increases.

WE may judge how much the fertility of Egypt is owing to the inundation of the Nile, when we consider that it leaves behind it a stratum of mud or slime, which, without any other manure, renews all the strength of the soil that the foregoing harvest had impaired; nay, it is frequently found necessary to temper it with a little sand, to abate it's excessive richness. And here it is worth observing, that the surface of the ground must have been considerably raised, in a long course of years, by these repeated accessions of mud and slime, so that formerly a less rising of the Nile was sufficient to overflow the country than at present. As to the quantity of mud thus annually left by the river, it is a point not easy to determine, but Dr. Shaw supposes that the surface of the land of Egypt is thereby raised somewhat more than a foot in a hundred years; according to which computation,

tation, the perpendicular acceſſion of ſoil from the deluge to the preſent time muſt have been about two and forty feet. And hence the doctor imagines, that in proceſs of time the whole country may be reduced to the greateſt barrenneſs, by being raiſed ſo high that the river will not be able to overflow it's banks. But Dr. Pococke is of another opinion, as ſuppoſing that a great quantity of ſoil is annually carried off in the productions of the earth, (which in Egypt is not ſupplied by manuring) and that the bed of the Nile may be raiſed by the ſubſiding of the heavier ſandy particles; for which reaſon he thinks it improbable that the land will ever riſe to ſuch a height, as to be deprived of the uſual inundations. He obſerves however, if that ſhould ever be the caſe in the Lower Egypt, the inhabitants would only be in the condition of thoſe of Upper Egypt, who are obliged to raiſe the water by art and labour.

WITH reſpect to the diſtribution of the waters of the Nile by means of canals, &c. we ſhall only add, that there is a great canal (Khalis they call it) which runs from the river quite through the city of Cairo, and ſeveral miles beyond it. Near the mouth of this canal there is a mound or mole, which is every year broken down with great ſolemnity and rejoicing, when the Nile riſes to the height of ſixteen peeks; and thereby the water is conveyed into the city, and from thence into the gardens and the adjacent country. The baſhaw himſelf accompanied by all his great officers, and attended by a vaſt multitude of people, aſſiſts at the ceremony of cutting this bank; and on this occaſion the trumpets and other muſic, the repeated ſhouts of the people, the firing of guns, &c. make an agreeable confuſion. In ſhort, bonfires, illuminations fireworks, ſeveral ſorts of

games and exercises*, and whatever can express an universal joy, are continued for three days and nights successively.

BEFORE we leave the Nile it is proper to take notice of it's famous cataracts, which are usually reckoned seven in number, where the river pours itself down high precipices with such a prodigious noise, that it may be heard at the distance of several leagues. De l' Isle represents one of them as falling from a height of two hundred feet, with a noise exceeding that of the loudest thunder; and it is said the water breaking with the fall raises such thick mists, that at a distance they appear like clouds. It is also reported that the water in it's fall forms a kind of arch, under which one may walk without being wetted; and the neighbouring people seem formerly to have made this a diversion, there being several niches and seats cut in the rock, and likewise some grottoes, which are now become inaccessible. Seneca relates a practice of the inhabitants near the cataracts of the Nile, which appears quite incredible, viz. That two of them get into a small boat, the one to guide it, the other to throw out the water, and, directing the little vessel with their hands, they dex-

* M. Thevenot, who was twice present at the ceremony we are speaking of, tells us that, among other diverting sights exhibited on that occasion, he saw two swimmers, whose performances were very surprising. One of these, with his hands tied behind him, and his feet bound with a chain weighing ten pounds, stood upright in the water, and in that manner went from the opening of the canal quite through Cairo, which is three miles and upwards. The other fellow swam in chains from one end of the canal to the other, with a pipe in his mouth, and a dish of coffee in his hand, without spilling it; and both these swimmers were handsomely rewarded.

trously

trouſly ſteer through the narrow channels without touching the rocks, till at laſt they are hurried down the precipice by the falling river. The frighted ſpectator now thinks them inevitably ſwallowed up and loſt, but preſently ſees them appear again upon the water at a great diſtance.—Some modern travellers ſeem to confirm this account; but Dr. Pococke, who lately ſaw ſeveral of the cataracts, takes no notice of any ſuch practice; nor does he repreſent them as ſuch frightful falls as they are generally ſuppoſed to be. The doctors tells us of ſome rocks that lie acroſs the river in three different places, dividing the ſtream, and cauſing ſeveral falls of water; but he makes the greateſt of them not above ſeven or eight feet, and others about four or five. He acknowledges however, that the natives talked of other cataracts beſides thoſe he ſaw, and even reckoned ſeven of them, which ſeems to agree with the accounts of the ancients: But, as to the Catadupa, thoſe high cataracts whoſe noiſe made the neighbouring inhabitants deaf, he looks upon the whole as fabulous.

We ſhall finiſh our account of the Nile by obſerving, that the waters of it run through a canal during ſix months into the lake of Mœris, and during the other ſix months flow back from the lake into the Nile. This lake is ſaid to have been dug by a king of Egypt of the ſame name, in order to correct the irregularities of the Nile, by receiving the ſuperfluous waters when the river roſe too high, and by ſupplying the lands with water when the river failed, which was let out of the lake into the adjacent country by a great number of canals and ditches. Many of theſe canals are ſtill ſubſiſting, which are equally ſerviceable to the preſent inhabitants of Egypt as they were to the ancient, and are attributed, like moſt other works

of public benefit, to the patriarch Joseph, whose name they have given to the great canal whereby the lake has a communication with the Nile.

ACCORDING to the accounts of Herodotus and and Diodorus, this lake was no less than three thousand six hundred stadia, or four hundred and fifty miles in circumference, whereas Pomponius Mela makes it no more than twenty miles; but the critics suppose this to be a mistake in Mela's copy, and have accordingly corrected it by those historians. The truth seems to lie between these two extremes, for travellers of veracity assure us, that the lake of Mœris is at this day between forty and fifty miles in length, and ten or twelve in breadth; though the extent of it varies as the Nile sinks or rises. It's banks are of a blackish soil, between which and the water the ground is slaty, and part of it covered with a deep slimy mud, with a thin cake of salt upon it's surface. The water has a muddy taste, is almost as salt as the sea, and consequently very disagreeable; but it is fresher towards the part where he canal enters from the river.

TO form this prodigious lake, if it was made by art, a vast quantity of earth must have been dug up, which naturally led Herodotus to inquire what became of it, and the Egyptians told him it was thrown into the Nile, and dispersed by the current of that river. This account, however, seems far from being satisfactory; and, as the inhabitants of the country could give no better answer to the historian's question, it is reasonable to suppose this spacious lake was rather a work of nature than of art, though perhaps king Mœris might enlarge it, by opening or cleansing it's communication with the Nile, erecting flood-gates, and even sinking some part of it deeper than it was originally; and this might give rise to the tradition

tradition that he caused the whole cavity to be dug, and formed the lake which retained his name.

HAVING finished our account of the Nile and what relates to it, except it's animals, which will be described hereafter, we should proceed, according to our method, to the fossils of Egypt; but, as we find nothing remarkable enough to detain us on that subject*, we shall pass it over, and in the next place take a view of it's vegetable productions.

VEGETABLES.

IT is not to be supposed, that such a country as Egypt, which is very hot and annually overflowed, should produce any great variety of plants; and it may be presumed that very few, except those of the aquatic kind, were originally produced in Egypt, but have been transplanted thither from other countries. The celebrated plant called papyrus, or biblus, which formerly grew plentifully on the banks of the Nile, and is perhaps a native of Egypt†, is now rarely to be met with, the poorer sort of people having almost destroyed it, by digging up the roots for fuel. This plant was made use of by the ancients to write upon, and thence

* Egypt is scarce noted for any thing of this kind except it's marble, especially it's fine porphyry, of which we have given a description in treating of the fossils in Turky in Asia.

† Though the papyrus grew chiefly in Egypt, it was also found in India; and Guilandinus assures us he saw it in Chaldea, at the confluence of the Tigris and Euphrates, large fens, wherein with his own hands he plucked a papyrus differing in nothing from that of the Nile. Strabo likewise speaks of a sort growing in Italy; but we do not find it was ever used for making paper.

our paper had it's name. It has a large ſtem, from whence ſome ſay they took the pith, which they worked into a white paſte or glue, and of that made a kind of paper, almoſt in the ſame manner as we do with our linen rags; but others ſay they uſed the inner rind for that purpoſe*. According to Pliny the root of this plant is as thick as a man's arm, and ten cubits long, from whence ariſe a great number of triangular ſtalks, at the extremities whereof it's flowers are ranged in cluſters. It's root is woody and knotty, it's leaves long like thoſe of the bulruſh, and it's taſte and ſmell reſemble thoſe of the cyperus, of which ſome reckon it a ſpecies.

IT is to be obſerved, that beſides paper the ancients made ropes, ſails, mats, blankets, ſhoes, and ſeveral domeſtic utenſils of the papyrus; but, more uſeful inventions having ſet all this aſide, the plant is now neglected, and almoſt extirpated out of Egypt.

HERE it may not be amiſs to add ſome remarks on the antiquity of the art of making paper of the

---

* The manner of making the Egyptian paper was as follows: They began with lopping off the root and head of the papyrus, as of no uſe in this manufacture; the remaining ſtem they ſlit lengthways into two equal parts, and from each of theſe they ſtripped the thin ſcaly coats or pellicles, whereof it was compoſed, with the point of a penknife. The innermoſt of theſe pellicles were reckoned the beſt, and thoſe neareſt the rind or bark the worſt; and accordingly they were kept ſeparate, and conſtituted different kinds of paper. As the pellicles were taken off, they extended them on a table, and then two of them were laid over each other tranſverſely, ſo that their fibres made right angles. In this ſtate they were glued together with the muddy water of the Nile, then preſſed, dried, and laſtly flatted and ſmoothed by beating them with a mallet; though ſometimes, with a hemiſphere of glaſs or the like, they gave them a farther poliſh.

papyrus,

papyrus, the origin whereof is indeed very obscure, though undoubtedly it was first discovered in Egypt, and, according to Isidore, in the city of Memphis. The æra of the invention is fixed by Varro, the most learned of the Romans, to the time of Alexander the Great, after the building of Alexandria by that conqueror; but several objections of no small weight are brought against this decision. Pliny recites a passage out of a very ancient annalist, wherein mention is made of paper-books found in Numa's tomb, who was prior to Alexander above three hundred years. In effect, Guilandinus maintains with great erudition, that the name and use of the papyrus were known to the Greeks long before Alexander conquered Egypt; and yet some have doubted whether the art of manufacturing the papyrus was so ancient as Alexander's time, chiefly on this ground, that, for two hundred years after Alexander, men wrote on skins and barks of trees. But this reasoning is not conclusive; the scarcity of the new manufacture may account for the use of those things, and paper might have been known in Egypt, Judea, Syria, and other parts of Asia, long before the birth of Alexander, though not in common use; but it came later to the Europeans, and probably was first publicly known amongst them by means of Alexander's conquest.

When the manufacture of the Egyptian paper ceased, is another question; for at present it may be reckoned amongst those arts that are lost.

The palm or date tree is one of the most useful that Egypt produces, but we have little to say concerning it here, having described it, and given an account of the manner of it's propagation, amongst the vegetables of Persia. The largest in Egypt grow about Faiume, where they are sawn into

into boards, which is not usual in other places. We have only to add, that the dates are ripe in November, and are reckoned very proper to be eaten in that cool season, being of a warm nature, and comfortable to the stomach. From this fruit they likewise draw a tolerable spirit, much used by the Christians of Upper Egypt; and this liquor in some measure supplies the place of wine, which Providence has not given to the country.

THE dumez, the sycamore of the ancients*, which the Europeans call Pharaoh's fig, is common enough about the villages near Cairo, and is likewise found in some parts of Syria. It is a large spreading tree, with round leaves, and bears a fruit like the common figs, but something smaller, and not much esteemed. It is remarkable that the fruit grows on several short branches without leaves, that shoot out from the main limbs of the tree; and at the end of the fig there gathers a sort of water, which is let out by cutting the skin, otherwise the fruit will not come to perfection. The tree is propagated by planting it's branches, which grow very fast.

THE cassia fistula, which we call the pudding-pipe-tree, is not uncommon in Egypt, though it does not seem to be a native of the country. The tree is tall, it's bark ash-coloured, it's wood very firm, it's grain close; and at the center it is black, but yellowish towards the outside. It's flowers are also yellowish, and produce a fruit in the form of a

* It is to be observed, that what we now improperly call the sycamore-tree is in reality a kind of maple, and very different from the sycomorus of the ancients. Of the wood of the sycamore the ancient Egyptians made their coffins, some of which remain sound to this very day.

long

long pod, which when ripe is full of a black sweetish pulp, divided by small woody cells; and in this pulp are found little hard grains, shaped like hearts, which are the seed of the tree. Cassia likewise grows in Brasil and in the Antillis, from which islands we chiefly receive it, though heretofore the popular cassia was that brought from the Levant. The Egyptians never use the cassia pods till they are four months old; for, when young and recent, they are observed to be noxious. They use the pulp extracted from the pod, in form of a bolus or potion; and are of opinion that taken internally it cools and purifies the blood. It is also found very beneficial to the bladder and kidneys, as extinguishing any immoderate heat of those parts, and preventing the generation of stones and gravel. The Egyptians likewise use it to alleviate the gout and hot pains of the joints, applying it by way of plaster to the part affected. It allays thirst, and is therefore good in feverish disorders.

THE acacia, or Egyptian thorn, ought to be mentioned amongst the vegetables of Egypt, as being of considerable use in medicine, and growing chiefly in that country and Arabia. From the green pods it bears a juice is expressed and inspissated, which is brought to us in bladders, containing globular masses weighing from four to eight ounces, which are externally blackish, but internally of a shining brown colour, hard, brittle, and of an austere taste. This juice we call acacia, and use it for preventing inflammations in the eyes, for curing ulcers in the mouth and fissures of the lips, for fastening the teeth and strengthening weak joints, and for stopping hæmorrhages and fluxes.—The German acacia is a counterfeit sort, being the juice of unripe sloes inspissated, and put up in bladders like the former.

IN

IN Egypt there is a tree called ſount, which ſeems to be a ſpecies of the acacia, and probably a native of the country. It is often planted on the ſides of the road, and there are little woods of it near ſome villages. It's keys or pods are uſed, inſtead of bark, in tanning of leather.—There is another ſort called fetneh, which is cultivated in gardens, it's yellow flowers being eſteemed on account of their ſweetneſs; but it's roots, when opened and bruiſed, emit a diſagreeable ſmell, and that perceptible to a conſiderable diſtance.

SENA is the leaf of a ſhrub which is not peculiar to Egypt, but cultivated in ſeveral parts of Aſia; and this is confeſſedly the beſt ſort, being much ſuperior in goodneſs to that of Italy. The ſhrub grows to the height of five or ſix feet, it's leaves are ſhaped like the point of a ſpear, it's flowers are yellow, and it's fruit is a greeniſh flat pod, containing ſeveral cells of ſeeds reſembling grape-ſtones, which ſome phyſicians prefer to the leaves themſelves. Sena purges phlegm in a particular manner; but, as it is apt to gripe, it ought to be given with caution to thoſe who have weak bowels, or are of an inflammatory habit of body. That ſena is to be choſen whoſe leaves are the ſharpeſt-pointed, and ſmell freſheſt; the brightneſs of it's colour, and quickneſs of it's flavour are alſo indications of it's goodneſs.

THE tree producing the fruit called ſebeſtens is found in Egypt, as well as in ſeveral parts of Aſia. It flowers in the ſpring, and the fruit is ripe in autumn, reſembling a little plum or prune, being of a blackiſh colour, it's pulp very ſweet and glutinous, and incloſing a triangular kernel. Sebeſtens are of ſome uſe in medicine, as they moiſten, ſoften, and obtund the acrimony of the humours.

humours. They are principally uſed in ſharp catarrhs, bilious fevers, and obſtructions of the belly; and in ſhort, as in figure, ſo in virtues, they reſemble damſins.—A kind of glue or birdlime is made of this fruit, called birdlime of Alexandria; and the Egyptians bruiſe it, and apply it as a cataplaſm to diſcuſs hard ſwellings.

In the lower Egypt, eſpecially near Roſetto, the lotus grows in great abundance. This plant is a ſpecies of the water-lilly; it's leaves float on the water, and cover it's ſurface, producing many flowers, which were formerly wove into the crowns of conquerors. The ancient Egyptians made bread of the middle or pulp of the lotus dried, which reſembles that of a poppy; and they uſed to eat the root of it, which is round, and as big as an apple. After the flowers follow round green pods, which contain a ſeed not unlike that of a cabbage. At preſent the Egyptians make a drink of this plant, mixed with ſugar, which is good againſt inward heats; and in ſummer they eat the ſtalks and heads of it raw, which are ſweet, moiſtening, and cooling.

The alhenna, alcanna, or alkenna, as it is called in our ſhops, is a ſhrub that ſhoots forth many branches, bearing leaves like thoſe of an olive-tree, but ſhorter, broader, and of a more pleaſant green. It's flowers are ſmall, and ſet like thoſe of the elder; and, having an agreeable ſmell, the Egyptians uſe them in their baths. They alſo make a ſort of yellow dye of the ſeed of this plant, with which the women paint their nails, and ſometimes their hair, by way of ornament.—As to it's medicinal virtues, it promotes the menſes, and it's leaves have an aſtringent quality, ſo that, being chewed, they heal ulcers in the mouth. A decoction of of them cures burns; and they are good againſt carbuncles,

carbuncles, and other fiery inflammations, if applied as a cataplasm. The flowers bruised in vinegar ease pains of the head, being applied to the forehead.

AMONGST other medicinal plants Egypt affords the coloquintida, though it is far from being peculiar to that country. The fruit of this plant, usually called bitter-apple, is about the size of a large orange, and full of pulp and seeds, both which are extremely bitter, especially the former. Coloquintida is brought to us from the Levant, and is of considerable use in medicine, but chiefly in officinal compositions, being an ingredient in most purging pills. It is one of the most violent purgatives known, insomuch that it sometimes excoriates the passages, brings away pure blood, produces strong convulsions, and brings on a fatal super-purgation. It is therefore seldom given inwardly in extemporaneous prescriptions, unless with great caution, and to persons of a robust constitution. Some say that coloquintida will purge children, by being reduced to a paste with ox-gall and applied to the navel.

TO this account of the vegetable productions of Egypt we shall add a few particulars relating to their harvests, of which they have two in a year, a spring-harvest from January to May, and a winter-harvest about October. For the latter, before the land is overflowed, they sow rice, Indian wheat, and what they call the corn of Damascus, which produces a large cane, and has an ear like millet. They also plant their sugar-canes at the same time; for all these require a great deal of water, especially rice, the largest crops whereof are produced near Damiata and Rosetto, where the lands are low, and more easily overflowed than those higher up the river. Their wheat and barley

are

are ſown in November, or ſomewhat ſooner or later, according as the waters of the Nile retire; and what is ſown at this time of the year they reap in March and April. At the ſame ſeaſon they ſow flax*, lentils, lupines, and other vegetables of the like nature, which they gather in the ſpring; and about November they likewiſe cultivate their carthamus, or ſafranoun as they call it, which grows like ſuccory, and the flower of it being of uſe in dying is accordingly brought into Europe. Their wheat is bearded, and their barley has ſix rows of grain in the ear, but is a coarſe ſort, and chiefly eaten by horſes. They have no oats, but plenty of beans, with which they feed their camels; and the people likewiſe eat them green, both raw and boiled. Neither have they any peaſe, but a ſort of vetch with one large grain in each pod, which is eaten raw when green, and boiled when dry, and is not much inferior to peaſe in taſte.—What has been ſaid may ſuffice for the vegetables of Egypt; let us now proceed to it's

ANIMALS.

WE do not find any great variety of animals in Egypt, but ſome of them are very remarkable, and deſerve the attention of the curious. The hippopotamus, or river-horſe, claims our notice in the firſt place, which is an amphibious ani-

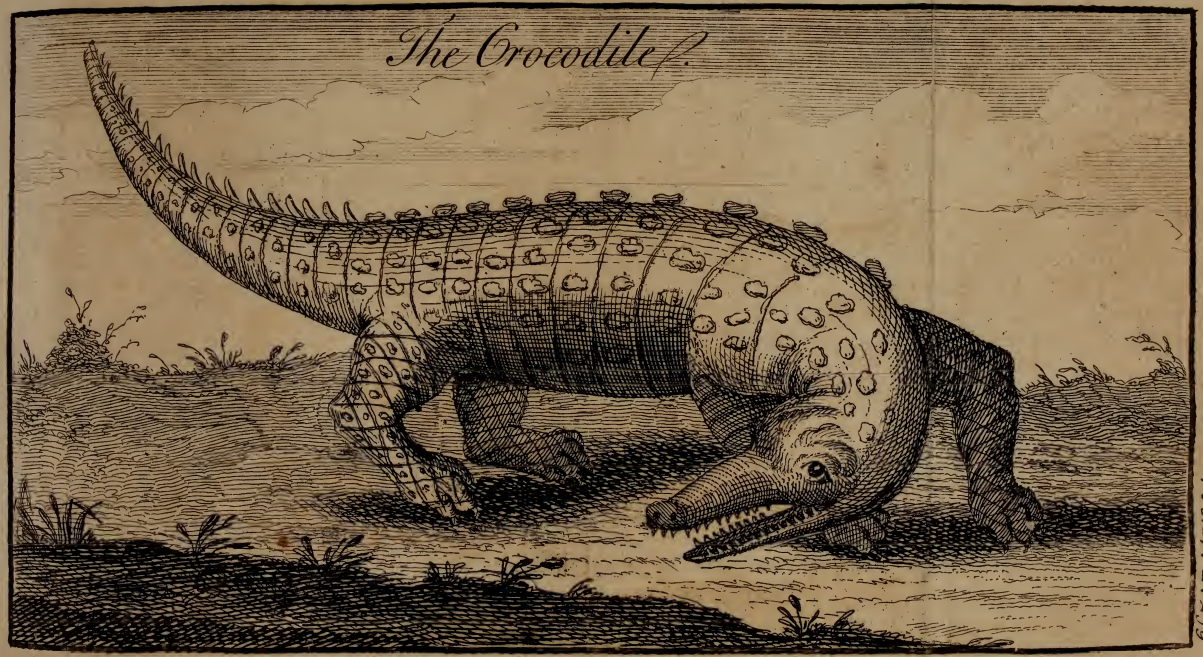
* Here it may not be amiſs to obſerve, that, though Egypt produces very good flax, it is not now ſo remarkable for it's fine linen as it was anciently, which was carried to ſuch a perfection, that the threads could ſcarce be diſcerned by the niceſt eye. They had ſuch plenty of it, as not only to cloath their prieſts and people of condition, and to make ſhrouds for their dead, but to export conſiderable quantities of it into other countries. In ſhort, this manufacture was in great reſqueſt all over the Eaſt; and the ſuperfine ſort of it, called byſſus, was often dyed in purple, and bore an exceſſive price.

mal,

mal, well known to the ancients, but seldom venturing into the lower parts of Egypt. It is found however in the Nile, and seems to be a native of Ethiopia, but now and then comes down into Upper Egypt, though they are very seldom taken. Mr. Moore and other gentlemen, employed in the service of the African company, inform us, that they are common in the river Gambia; and Mr. Stibbs in particularly observed, that the higher they went up that river, they were the more bold and numerous. He tells us he has often shot them so as to stain the water with their blood, but they always got away, rising afterwards at some distance, blowing up the water, grating their teeth, and roaring with great anger. This gentleman adds, that Lemery is mistaken when he affirms they eat men, &c. their food being only grass, as is evident from their excrements.—It is not easy to apprehend how this animal came to be called a horse, to which it has scarce any resemblance, having a body like an ox, legs like a bear, large round feet with four claws on each, a tail like an elephant, and no more hair upon it's body than there is upon that creature. In the lower jaw it has four large teeth, two of them crooked, the other straight, but standing forwards, and all of them as thick as the horns of an ox. It's eyes and ears are small, considering the bulk of the animal; but it has a wide mouth, great open nostrils, and an upper lip like a lion's, on which grows a bristly beard. M. Thevenot saw one of these creatures in Egypt, which had been shot by some Janizaries as it was grazing near the river, and his description of it agrees pretty well with that which we have given*. The teeth of the hippo-

* The learned Bochart takes the hippopotamus, and not the elephant, to be the behemoth mentioned in the book of Job; and this opinion he supports by various arguments, which may be seen in the Philosophical Transactions, N° 326.

potamus



Vol. IV. P. 239

potamus are said to exceed all other bones in solidity and whiteness, which colour they always retain, whereas ivory in time is apt to become yellow. Rings made of these teeth are supposed to be of great virtue against the cramp; and the testicles of the animal dried and pounded are drank as an antidote against the bites of serpents. As to what is affirmed both by the ancients and moderns, that the hippopotamus has a method of bleeding himself with a sharp-pointed reed, when he finds himself out of order, we look upon as a fiction; and, were it true, it is difficult to conceive how any one should have an opportunity of making the observation.

THE crocodile is another amphibious animal, an inhabitant of the Nile, but not peculiar to that river, being also found in the Ganges and other large rivers of India. It is shaped like a lizard, has four short thick legs, and it's feet are armed with claws. It's back is covered with impenetrable scales, like some old pieces of armour, and resembling (according to M. Thevenot) the heads of the nails in an old court-gate; but it's belly is soft, and easily wounded. It has a broad flat head, a snout almost like a hog, and the opening of it's mouth reaches to it's ears. The teeth of this animal are white, long, sharp, and somewhat crooked, and it's upper jaw is moveable, which can be said of few other creatures*. It has no tongue, but there is a fleshy substance lies along it's lower jaw, which perhaps may serve to turn it's food. Crocodiles have pretty large eyes,

* The same is observable in parrots, and in the acus vulgaris or gar-fish, and perhaps in no other animal. See Ray's Synopsis. p. 109.

and

and are very quick-sighted, which is partly owing to a sort of channel at the back of each eye, whereby they can see behind them as well as before. It is said they can run fast, but, as they cannot easily turn their long unwieldy bodies, their prey has the greater opportunity of escaping. Some crocodiles are twenty-five or thirty feet in length, but, though they are very cruel and voracious, they seldom venture to attack men in companies, nor even a single person, unless they can do it by surprize. It is reported that they cannot take a man swimming in the water*, but if a man or beast stand near the river they jump out suddenly, and seize him with their fore claws, or beat him down with their tails, wherein their strength chiefly consists. They seldom go above twenty or thirty yards from the river; but lie basking in the winter upon banks of sand, and in the heat of summer they generally keep under water. When they are disturbed they do not seem much afraid, but walk away slowly, and hide themselves gradually in the river. The manner of their propagation is by laying eggs, to the number of fifty or sixty, and covering them about two feet deep in the sand, where they are hatched in twenty or thirty days. The people search for these eggs with an iron pike in order to destroy them†, for as soon as the young ones are hatched

* This seems to be a mistake, for Mr. Moore tells us of one of the African company's slaves, who was carried away by a crocodile as he was washing himself in the river Gambia; and Thevenot says that nobody cares to swim in the Nile, for fear of being seized by these devouring animals.

† Whether the Egyptians eat the eggs of the crocodile, or not, travellers have not informed us; but Mr. Moore says, he has seen the natives about the river Gambia eat them, even when they had young ones in them as long as his finger, on which account they reckon them the greater dainty.—The eggs are about as big as those of a goose.

they

they crawl into the river. The flesh of the crocodile (according to Thevenot) is very good food, and not poisonous, as some have imagined. As to the tears of this animal, and his alluring cries like those of a child or person in distress, in order to draw people near him and make them his prey, we scarce need tell the reader it is nothing but a fiction.—The usual way of killing crocodiles is perhaps by shooting them in the belly, where they are vulnerable, as we observed above; but travellers give us an account of other methods of taking them. Sometimes they dig pits near the river, covering them slightly over, so that the crocodiles fall into them when they come ashore; and having let them remain there several days, till they are weakened by hunger, they hamper them with ropes, and draw them out alive. They have likewise a way of making some animal cry near the river, which entices the crocodile out, and a man who lies concealed takes an opportunity of thrusting a spear into his body; which being fastened to a rope, they let him run into the water to spend his strength, then drag him out, and tie his jaws together.—We have only to add, that most writers make the alligator and the crocodile the same, and we are inclined to fall in with that opinion; at least there is little difference between them. Those who think otherwise observe, that the crocodile has longer legs, the knots on his back are thicker and higher, and his flesh has not such a musky scent as that of the alligator. Besides (say they) the crocodile carries his tail upwards like a bow, whereas the alligator drags his on the ground.

AFTER the crocodile it is natural to take notice of a large Egyptian rat, supposed to be the ichneumon of the ancients, which, according

to them, used to creep down the crocodile's throat while he slept with his mouth open, and, having fed upon his liver, gnawed his way out again through the belly of that animal; but this savours too strongly of fable to want confutation*.

THE ichneumon is of the weasel kind, with a longer and narrower body than a cat, somewhat approaching to the shape and colour of a badger, it being of a yellowish grey. It's nose is black and sharp; it's legs short, and each of it's feet has five toes; it's tail is very long; it's teeth and tongue much like those of a cat. This is a very cleanly animal, brisk, nimble, and of great courage, for it will engage a dog, and destroy a cat, by seizing on it's throat. Yet to man it is quite inoffensive; and in Egypt is kept tame, running about the house, destroying all vermin, and playing tricks like a spaniel. When wild, he cannot overtake any nimble animal; but this he makes up by his assiduity; his legs being short, he is not much seen, but he conceals himself still more, by crawling with his belly close to the ground, which he does all day long; but, his hearing being exceeding quick, upon the least noise, he starts up on his hinder legs. If the noise is made by any reptile, bird, or small beast, he observes whereabouts it is, places his nose directly in a line with it, and begins to move towards it. He is slow and silent, but constant in his approach; often stopping to

* Of the same fabulous stamp is the account we have of a little bird called trochilus, which is said to be the only creature that the crocodile is in friendship with, and does not endeavour to destroy; but this (it seems) is for the service the bird does him, by flying into his mouth, and feeding upon the meat that sticks between his teeth, or cleansing his jaws of the leeches that infest them.

hear

hear, or look forward, to know exactly where the creature is. When he has got within about five feet, he ſtops; for nature, which has denied him ſpeed, has given him ſtrength to leap beyond moſt other creatures; and therefore, having taken good aim, he ſprings from the place, and falls directly on his prey. Thus he deals with birds and beaſts; but to ſerpents he gives chace, and always ſeizes them by the neck, to avoid their bite. The ichneumon is not only an enemy to ſerpents themſelves, but alſo to their eggs, which he hunts after continually and deſtroys, though he does not feed upon them. How mercifully, ſays a pious writer, has God given this animal in the countries where thoſe terrible reptiles moſt abound! and which, without this proviſion, would be ſo over-run with them, as to be uninhabitable.

THE dung of this animal, mixed with muſtard-ſeed and vinegar, is eſteemed good againſt the gout, being applied to the part affected; and it is ſaid to be ſudorific, to cure the cholic and venomous bites, and to purify the blood.

AMONGST the winged tribe of Egypt we find the ibis, a bird held in great veneration by the ancient Egyptians, on account of their deſtroying great numbers of ſerpents and other pernicious or uſeleſs reptiles; but this bird is now rarely to be ſeen in the country. Thoſe that are obſerved about the iſlands of the Nile are moſt of them greyiſh; whereas Herodotus deſcribes two kinds of them, the one all over black, and about the ſize of a heron; the other white, except the head, neck, and ends of the wings and tail, which are black as the former. However, though the ibis be not ſo common in Egypt as heretofore, the want of it is ſufficiently ſupplied by the ſtork, a bird almoſt as much eſteemed and reverenced by the preſent Mahometans in

that country, as the ibis was by it's ancient inhabitants; to kill a ſtork, or even to moleſt it, being accounted a ſort of profaneneſs*.

ANOTHER bird much regarded in Egypt is a ſort of large hawk, of a browniſh colour, with a very fine eye, which may be looked upon as a domeſtic animal, as it frequents the tops of houſes, ſo that one may often ſee hawks and pigeons ſitting quietly together. This may ſeem ſtrange, but it is to be obſerved, that theſe hawks are not birds of prey, though they eat fleſh when they happen to find it.

THEY have likewiſe a large white bird with black wings, ſhaped like a raven; but it is very ugly, and not at all ſhy. Theſe live in the ſame manner as the tame hawk juſt deſcribed, and are called Pharaoh's hens.

THEY have a very beautiful fowl called the meſſenger bird, which is extremely common. It is almoſt as large as a dove, and is not only finely ſpeckled, but has, on the top of it's head, a tuft of feathers, which it ſpreads when it alights on the ground. There is here alſo a beautiful white bird, which the Europeans call the field-hen: it reſembles a ſtork, but it is not half ſo large; and is ſeen about the fields like tame fowl.

THE wild geeſe in Egypt, of which they have abundance, are of a different kind from ours in Europe; and vaſt numbers of wild ducks frequent the pools in the low grounds, which are not quite dry till ſome months after the inundation of the Nile is abated. Their partridges are likewiſe very

* A particular account of the ſtork, and ſome conjectures relating to the origin of the regard paid to it, ſee in Vol. II. p. 185. & ſeq.

different

different from thoſe of other countries, being about the ſize of a ſmall dove. The cock is a beautiful brown bird, adorned with large ſpots of a lighter colour; and the feathers of the hen are like thoſe of a woodcock. As to their tame fowls, beſides the common ſort, they have a kind of hens which are very cheap, and little inferior to geeſe in bigneſs.

THE ſandy and mountainous tracts, which run along each ſide of the fertile part of Egypt, abound with animals of the ſerpentine and lizard kinds. Of the former, a horned viper, the ceraſtes of the ancients, is the moſt common ſpecies, and great numbers of them are taken, being reckoned of excellent uſe in medicine. They are of a yellowiſh colour, like that of the ſand in which they are found; and have a ſort of horns, ſomewhat reſembling thoſe of ſnails, but of a real horny ſubſtance. They are remarkable for living a long time without any manner of ſuſtenance, as has been found by experience; for Dr. Shaw tells us he ſaw a couple of theſe vipers, which an apothecary at Cairo had kept five years in a bottle without any ſort of food, unleſs a little ſand may be reckoned as ſuch, in which they coiled themſelves up at the bottom of the bottle. When the doctor ſaw them, they had juſt caſt their ſkins, and were as briſk and lively as if but newly taken.

A SERPENT of great bulk called thaibanne (perhaps the Thebanus ophites of the ancients) is found in Egypt, though not very frequently. Some of them are ſaid to be three or four yards long, and as thick as a man's arm. We find no particular deſcription of this ſerpent, but it is ſaid to have a fleſhy ſubſtance reaching on each ſide of it's neck from it's jaw to about a third part of it's body, which it can extend or contract at pleaſure,

and thereby throws itself forwards surprisingly. This is not improbable; but as to dragons and flying serpents, of which some authors speak very positively, we are apt to think they never existed either in Egypt or any other country, but merely in imagination. What is related of the basilisk or cockatrice, whose eyes (according to the ancient naturalists) dart certain death, carries likewise with it a great air of improbability.

AMONG all the serpents of Egypt none appear to be more remarkable than what is called the miraculous serpent, or the serpent Heredy. At a considerable distance up the Nile is what is called the grotto of this serpent, which is the tomb of a pretended Turkish saint, adorned with a cupola. The Arabs affirm that this saint who is named Heredy, dying, was buried in this place; and by the favour of the Almighty was transformed into a serpent that never dies, but heals diseases, and bestows favours on all who implore his aid. Of this serpent both Dr. Pococke and Mr. Norden have given a very particular account, and perfectly agree in what thay relate of it. It appears that this serpent pays a greater respect to the rich than to the poor; for, if a governor be seized with any disorder, the serpent has the complaisance to suffer himself to be carried to his house; but one of the common rank must not only make a vow to reward his priests, but send a spotless virgin on the important embassy: and none but the fair have any influence on him; and, should her virtue be in the least sullied, he would be inexorable. On her entering into his presence, she makes him a compliment, and, with the greatest humility and submission, intreats him to suffer himself to be carried to the person who has need of his assistance. When, being unable to refuse any thing to female virtue, he

he at first begins with moving his tail, on which the young woman redoubles her intreaties, till, springing up to her neck, he places himself in her bosom, and there remains quiet, while he is carried in state, in the midst of loud acclamations to the house of the person who dispatched the young ambassadress. No sooner is he brought into the room, than the patient begins to find himself relieved. Yet this wonderful physician does not withdraw, he being very willing to remain some hours with the patient, if during the whole time they take care to regale his priests, who never leave him. All this is performed to admiration, provided no Christian or other unbeliever comes in; for the sagacious serpent, on perceiving him, would instantly disappear; the priests would then search for him in vain; and they say it would be impossible to find him; for, was he carried to the other side of the Nile, he would return invisibly to his dwelling in the tomb. In short, the Arabs boldly assert, that, were he cut in pieces, the parts would immediately join again, and that, being immortal, nothing can put a period to his life. Even the Christians, who ought to be possessed of a greater degree of wisdom than these ignorant Arabs, pretend that this serpent is the devil himself, whom the supreme Being has permitted to mislead the people; and in this belief they are confirmed by a tradition, that to this place the angel Gabriel banished the devil Asmodi*, whom he is said to send into Egypt. Mr. Norden observes, that he is firmly persuaded that both the Arabs and these Christians offend against the rules of reason. "Before we consider a thing as miraculous, says he, it is necessary to examine whether the fact itself be true; whether the circum-

* Tobit viii. 3.

" ſtances are ſuch as are pretended, and whether " no fraud be uſed. I agree that the ſerpent is " there, but it cannot be immortal; he un- " doubtedly dies, like other ſerpents; and the " prieſts who draw profit from him, ſubſtitute " another of the ſame kind in his room. Were " they indeed to cut the ſerpent in pieces, and " were the parts ſeen to join again, it might be " eſteemed a proof of it's immortality; but they " can never be brought to this; and, when the " emir of Akmin ordered them to make this expe- " riment in his preſence, they excuſed themſelves. " Is there any thing eaſier than to make a tame " ſerpent obey certain ſigns! The virginity of " the ambaſſadreſs is ſecured by her being ſo young " as to be free from ſuſpicion, and ſerpents are " known to be attracted by certain odours and " herbs, with which the girl may be rubbed; at " leaſt ſhe is adorned with chaplets and garlands " of flowers, in which they take care not to forget " ſuch as are agreeable to the ſerpent. In ſhort, " if it be aſked, how it is poſſible that it ſhould " diſappear from the ſight of a number of people? " I anſwer, that it is ſufficient to conceive theſe " prieſts are excellent jugglers, and there will " be no difficulty in imagining them capable of " conveying away the ſerpent in the preſence of a " multitude of ſpectators, without the moſt atten- " tive and quick-ſighted being able to perceive it: " whoever has ſeen the tricks daily played by the " Egyptian mountebanks in the great ſquare before " the caſtle of Cairo, muſt have been ſtruck with " feats much more remarkable than this*".

IN

* According to Mr. Groſe, it is a cuſtom in India that, when a ſnake, lurking in a houſe, has bit any perſon, one of their

In Egypt there are several sorts of asps, whose poisons have different effects, but are all finally mortal. That species which Cleopatra is supposed to have used to put an end to her life, and thereby avoid the disgrace of being led as an ornament in Cæsar's triumph, is of a singular nature, being very poisonous, and yet supposed to eject a less quantity of venom than any other of the kind. This is certain, that the punctures made by it's teeth are hardly perceptible, but the effects of it are very surprising; for, after a person has been bitten about an hour, he finds himself heavy and inclined to sleep, without any pain or disorder of mind; his limbs gradually lose their strength, a

---

their jugglers is sent for, who, with an instrument that has some resemblance of a flagelet, plays certain tunes, the sound of which operates so powerfully on the snake, that he leaves his hole, and, with visible reluctance, presents himself to those that stand ready to kill him. Our author observes, that he is fully aware of the ridicule this will meet with from many; but adds, that he prefers even the certainty of incurring it, to the suppression of what he himself tried to disbelieve, till convinced of the truth of it. To this we shall add another account from the same author, which will confirm the above reasons, and shew that there is far from being any thing miraculous in the above Egyptian snake. It is usual in India, says he, for the jugglers to carry snakes in round baskets; and, when they uncover them, begin to sing and play upon their pipes, at which all the snakes raise the upper parts of their bodies, and keep time with the music, by the motion of their heads, while their lower parts remain coiled up in the bottom of the basket. If the master ceases ever so little, they leave this kind of dancing, and, getting out of the basket, hiss at each other, as if they would fight; but, on renewing the music, they immediately fall to dancing again. The Europeans, he adds, are not very fond of having these snakes, some of which are very large, come near them; though they are told by their owners, that, their teeth being pulled out, there is no danger to be feared from them.

pleasing stupidity succeeds, and at length he dies quietly, even without a groan. This sort of asp has very red eyes, and two of it's longest teeth are hollow, from whence it's poison proceeds. It's scales are hard, dry, and reddish, and it's neck swells considerably when it is provoked.—Another species of asps, which seem to be what we call darts, have their holes in the banks of the Nile, from whence they spring out suddenly upon the unwary passenger; and their bite is so venomous, that amputation is the only cure, without which the patient dies in terrible agonies. The belly of this asp is white, his back of a deep blue, and on each side he has a black line from head to tail. His body is of an ash-colour, full of round black spots no bigger than lentils, each of which is encompassed with a circle.

THE chameleon is an animal very common in Egypt, but, having already given a particular account of it and it's surprising properties, we refer the reader thither*, to avoid unnecessary repetitions; and only observe, that the chameleons of Egypt are generally larger than those of other countries.

THE scink, which is commonly found under flat stones, or in the holes of old walls and ruins, is taken by some to be a land crocodile, as it exactly resembles that which frequents the water; but it is very small and harmless, feeding chiefly upon fragrant herbs and flowers.—There is another ugly lizard in Egypt, that is seen about the walls of decayed buildings but in the greatest numbers at Alexandria.

LASTLY, there is a lizard called worral, which is sometimes three feet or forty inches in length,

* See Vol. III. under the animals of Turky in Asia.

and

Pyramids of Egypt

and six or seven inches broad, usually of a bright reddish colour, with dark spots intermixed. It has no teeth but a forked tongue, which it puts out like a serpent, and feeds upon flies and the smaller lizards. Holes and caves in the mountains are the places it frequents, where it sleeps in the winter, and only appears in the heat of summer. It it a harmless creature, and of great docility, and particularly remarkable for it's being affected with music*.

HAVING thus described such animals of Egypt as seemed most worthy of observation, our next step is to take a view of some of the antiquities of that country, where a person who has a taste for curiosities of that kind may find ample matter of entertainment.

ANTIQUITIES.

WE cannot begin this article better than with a survey of the famous pyramids, those wonderous monuments of the wealth and grandeur of the ancient kings of Egypt, which are on all hands allowed to have been built at least twelve hundred years before the birth of our Saviour. The three pyramids that are most taken notice of by travellers, as exceeding all the rest both in bulk and beauty, are situated on a ridge of rocky hills

* Dr. Shaw says he has seen several of these lizards keep exact time and motion with the dervises in their circulatory dances, turning when they turned, and stopping when they stopped; and this the doctor supposes may have some relation to the quality which the serpent is imagined to have of being naturally affected with music: but Dr. Pococke, who procured a worral alive, could not perceive that music had any influence upon that animal.

on the borders of the Lybian desert, about ten miles westward from the village of Gize or Geeza, which is almost opposite to the city of Cairo, and is supposed to be the spot where the ancient Memphis stood, though there are now not the least traces that is to be found there, of the ruins of that renowned city. The hill, on which they stand, rises with an easy ascent from the plains of Egypt, to the height of a hundred feet or upwards; and the rock consists of such freestone as is used in the pyramids themselves.

THE largest of these pyramids, which has suffered least by time and weather, is six hundred ninety-three English feet square at the basis, and it's perpendicular height is four hundred ninety-nine feet*; but, if we take the height as the pyramid ascends inclining, it is then six hundred ninety-three feet, which is exactly equal to the breadth of the basis, so that the angles and basis make an equilateral triangle. The whole area therefore of the base contains four hundred eighty-two thousand two hundred and forty-nine square feet, which is something more than eleven acres of ground.

WE ascend the outside of this pyramid by steps, which at the bottom are four feet in height and three in breadth, but the higher we go they gradually diminish; being so contrived, that a line stretched from any part of the basis to the top

* This measure is Mr. Greaves's, who observes, that, notwithstanding the boasted height of this pyramid, the spire of St. Paul's church in London, before it was burnt, exceeded it, being (according to Mr. Camden) five hundred and thirty-four feet perpendicular from the ground.

would

would touch the edge of every ſtep, if the ſtones were not impaired by the air and rain; but at preſent they are ſo waſhed and mouldered away, that they cannot conveniently be aſcended, except on the ſouth ſide or at the north-eaſt angle. The breadth and depth of every ſtep is one intire ſtone, ſeveral of them thirty feet in length; and the number of ſteps, according to Mr. Greaves, is two hundred and ſeven, but travellers differ in their computations. Whether theſe ſteps were intended to facilitate the aſcent to the top, or were deſigned to be filled with priſmatical ſtones, ſo as to make each ſide of the pyramid ſmooth and upon a plane, we ſhall not determine, but Dr. Shaw gives ſome good reaſons for the latter opinion.

THE top of this pyramid does not end in a point, as it appears to thoſe who view it from below, but in a little flat or ſquare, conſiſting of nine ſtones, beſides two that are wanting at the angles. Each ſide of the platform is about ſixteen feet, ſo that a conſiderable number of people may ſtand upon it, from whence there is one of the moſt beautiful proſpects that can be imagined. It has been reported by many travellers, that a man ſtanding on the top cannot ſhoot an arrow beyond the bottom of the pyramid, but that it will fall on ſome part of the ſtructure; whereas it is certain that a ſtrong arm and a good bow will ſend an arrow to a much greater diſtance. As to the ſtory of theſe pyramids caſting no ſhadows, it is contrary both to reaſon and experience; for, though at noon they caſt no ſhadow in the ſummer, and for almoſt three parts of the year, yet in winter at noon, and in the morning and evening all the year round, they certainly caſt a ſhadow proportionable to their bigneſs: And it is obſervable, that Thales took the height of theſe pyramids by

by their ſhadows above two thouſand years ago, as we learn from Pliny and Laertius.

ON the north ſide of the large pyramid, ſixteen ſteps from the bottom, there is a ſquare narrow paſſage, leading downwards into the body of the ſtructure. This entrance is about three feet high, and as many wide, and it's length ninety-two feet and a half. Thoſe who have been curious enough to creep through this narrow paſſage inform us, that at the end of it there is a wider place, about ninety feet long and of unequal breadth, ſuppoſed to have been dug for the diſcovery of ſome hidden treaſure, but not remarkable for any thing except the large bats by which it is inhabited. On the left hand they enter another paſſage, five feet high and a hundred and ten in length, through which they aſcend to two galleries, one of them running off horizontally, and the other riſing upwards in the ſame direction with the paſſage. The horizontal gallery leads to an arched vault or chamber, about ſeventeen feet long and fifteen broad, which ſmells like a grave, and is half full of rubbiſh. The walls are intire, and plaiſtered over with lime; and the roof conſiſts of large ſmooth ſtones, laid ſloping, ſo as to meet at top in an angle. Near the entrance into this gallery there is a circular well, three feet in diameter, which is lined with white marble; and little holes are left in the ſides, oppoſite to one another, wherein a perſon that deſcends into it muſt fix his hands and feet; which ſort of contrivance is ſeen in many of the wells and ciſterns of Egypt.—The aſcending gallery, whether we regard the materials or workmanſhip, is not inferior to the moſt magnificent buildings. It is paved and lined with white poliſhed marble, cut in vaſt ſquares, and ſo curiouſly put together that the joints are ſcarce diſcernible.

cernible. The height of this gallery is twenty-six feet, it's breadth six, and on each side of it there are benches of polished stone.

From hence through a square hole they pass into some little chambers or closets lined with marble, and then into a noble hall situated in the center of the pyramid, being equally distant from all the sides, but rather nearer the basis than the top. The floor, sides, and roof of this room are all of Thebaic marble; and the stones are of a prodigious size, especially those that form the roof, lying across from one side to the other like so many huge beams, and supporting an enormous weight. As to it's dimensions, it's length is thirty-four feet, it's breadth seventeen, and it's height near twenty.

In this stately hall stands a tomb, placed exactly north and south*, and equally distant from all sides of the room except the east, from whence it is as far again as from the west. It consists of one piece of marble hollowed, without any lid or covering, and being struck it sounds like a bell. The general opinion is, that it is the tomb of Cheops or Chemmis, king of Egypt, the supposed founder of this pyramid. There is no appearance of any corpse having ever been laid in it, and probably there never was; for Diodorus, who

* It has been observed of the pyramid we are speaking of, that the sides of it stand exactly facing the four cardinal points, east, west, north, and south, and consequently mark the true meridian of the place; which precise position could not well have been owing to chance, but it was in all probability the effect of art and design; and that it really was so seems confirmed by the position of the tomb within: So that this ancient structure is a strong and lasting proof of the early progress of the Egyptians in the science of astronomy.

wrote

wrote about sixteen hundred years ago, informs us, that Chemmis, and Cephren, the founder of the next pyramid, notwithstanding they intended these structures for their sepulchres, were not buried in them, the people being so exasperated by the hardships they had undergone in the erecting them, and by their repeated cruelties and oppressions, that they threatened to tear their dead bodies in pieces; upon which they commanded their friends to bury them in some obscure place in a private manner.

THIS tomb is of the same marble with which the whole room is lined, namely, a sort that is streaked and variegated with black, red, and white spots, which some call Thebaic, but others suppose it to be a kind of porphyry. It's figure is like an altar, and the marble smooth and plain, without any sculpture or other ornament. If we measure it's outward superficies, it is seven feet three inches and a half in length, three feet and almost four inches in depth, and much the same in breadth; but the cavity within is little more than six feet long, two feet deep, and as many broad. From these dimensions, as well as from the embalmed bodies in Egypt, it has been justly observed by Mr. Greaves and others, that there is no decay in nature, but that the men of this age are of the same stature they were three thousand years ago. How this tomb was brought into the place where it now stands is difficult to conceive, it being impossible it should come through the narrow passages above described; which makes it generally supposed to have been raised up thither from without, before the room was finished, and the roof closed up: but perhaps there is some other way to the room within the structure, which has not yet been discovered.—We have nothing to add concerning this

this tomb, but that there is a hole dug underneath it, and a large ſtone in the pavement near it removed, which was probably done in hopes of finding ſome treaſure; the burying of money in ſepulchres being not only a practice of the ancients, but continues to this day in the Eaſt-Indies.

TRAVELLERS take notice of a remarkable echo, or rather of a long continued ſound, which is heard on diſcharging a muſket at the entrance into the firſt pyramid. This is mentioned by Plutarch; but, ſurpriſing as it is, the effect may be accounted for, as Mr. Greaves obſerves, by conſidering, that the ſound being ſhut in, and carried along thoſe ſmooth narrow paſſages already deſcribed, to the middle of the pyramid, finding no way out, reflects upon itſelf, cauſing a circulation of the air and a confuſed noiſe, which gradually leſſens and dies away as the motion ceaſes.

TO the ſouthward of the firſt pyramid, at a very little diſtance, ſtands the ſecond, ſuppoſed to have been built by Cephren the brother of Cheops, and deſigned for a ſepulchre, as well as the former. The ſtones of this pyramid are white, but much leſs than thoſe of the firſt; nor do the ſides riſe by degrees or ſteps, like the other, but are ſmooth and even; and the whole ſtructure, except on the ſouth, ſeems not to have received any conſiderable damage. The dimenſions of it, both as to height and breadth, are much the ſame as thoſe of the pyramid already deſcribed, but it's aſcent is ſomewhat ſteeper. At ſome diſtance from the baſis, on the north ſide of this pyramid, there is a hole, which probably was made in order to find a paſſage to the inſide of it; but none has been yet diſcovered, nor is it known whether there be any rooms or apartments within, though it is reaſonable to ſuppoſe there are, as well as in the former.

—On

—On the north and weſt ſides of this pyramid there is a foſſe or trench, about ninety feet in breadth and thirty in depth, along which are a great number of cells or apartments hewn out of the ſolid rock, deſigned (as is ſuppoſed) for lodgings for the Egyptian prieſts. They are entered through ſuch ſquare openings as that deſcribed in the firſt pyramid, and many of the chambers have a communication with others behind them, which are now filled with rubbiſh.

ABOUT a furlong from the ſecond pyramid ſtands the third, upon ſuch an eminence or riſing of the rock, that it appears equal to the former at a diſtance, though it is much leſs both in height and breadth. Some ancient writers affirm, that this pyramid was built, or at leaſt caſed, with black Ethiopic marble; but, whatever it may have been formerly, at preſent the whole ſtructure ſeems to be of a clear whitiſh ſtone, ſomewhat better and brighter than either of the former pyramids. Each ſide of it's baſe is about three hundred feet, and it's height is much the ſame; and all round it are to be ſeen the remains of the granite with which it was adorned, the greateſt part whereof has been carried away, though ſome few pieces continue in their places. Mycerinus, the ſon of Cheops, is ſaid to have been the founder of this pyramid, and Diodorus ſays his name was engraved on the north ſide of it, but nothing of that kind is to be ſeen at preſent.

AT about the diſtance of ten miles from theſe pyramids, are thoſe of Socotra, ſo called from a mean village of that name. Theſe pyramids, which extend from north to ſouth, are ſeated at the foot of the mountains, in a plain that appears formed by nature for the uſe to which it is applied, it being of no great extent, but ſo high, that it is never overflowed

overflowed by the Nile. One of these pyramids rises above the rest, and is called the great pyramid to the north. Mr. Norden, on measuring it, found that it's east side extended six hundred and ninety feet, and the north side seven hundred and ten. It's perpendicular height is three hundred and forty-five feet. It has a hundred and fifty-six steps, each from two to three feet in height; and is built of the same kind of free-stone as the others, but was cased with a fine hard stone, which is still remaining in several parts of the structure, though a great deal has fallen down. About one-third of the way up, is an entrance three feet five inches wide, and four feet two inches high. The stones, within, are of the height and breadth of the entrance, and about five feet in length. Our author and his companions entered this passage which is steep, and has also holes cut as rests for the feet. Having passed through it, they entered a room twenty-two feet and a half long, and eleven feet ten inches wide. At the height of ten feet six inches, a range of stones projects five inches inwards on each side; and in the same manner twelve tiers project one farther than the other, till they meet at the top. To the west of this room is another that resembles it: and they are both formed of smooth white stones, so large, that there are only seven of them in length, and three or four in breadth.

ANOTHER pyramid, at the distance of a mile to the south-east, is termed the great pyramid to the south, and is about six hundred feet square at the bottom. It is built within of good hewn stone, and appears to have been originally cased all the way up.

ABOUT two miles to the east of the last great pyramid is one on a lower ground, built of unburned brick,

brick, that seems to have been made of the mud of the Nile, it being a sandy, black clay, with some pebbles and shells in it, mixed up with chopped straw, in order to bind the clay together, as unburned bricks are usually made at present in Egypt, and other parts of the East. Some of these bricks are thirteen inches and a half long, six inches and a half broad, and four inches thick; but others are fifteen inches long, seven broad, and four inches three quarters in thickness; but were not laid so as to bind each other. This pyramid is much crumbled, and very ruinous. It extends two hundred and ten feet on the west side, and is a hundred and fifty feet high; and the top is forty-three feet by thirty-five. It seems to have been built with five degrees, each being ten feet broad, and thirty deep; yet the ascent is pretty easy, on account of the bricks having crumbled away.

NOTWITHSTANDING what we have said of Cheops, Cephren, and Mycerinus, it is a subject of much dispute, who were the builders of these wonderful structures. Some pretend they were erected by the patriarch Joseph for granaries, to lay up the corn of the seven plentiful years against the ensuing famine; but, most of them being solid piles of stones, with very few cavities within them, and their figure the most improper of any for that purpose, the conjecture at first sight appears groundless and absurd. Others suppose them to have been erected by the Israelites, during their heavy bondage in Egypt under the tyranny of the Pharaohs; and this opinion is supported by the authority of Josephus, who says they were employed in cutting canals, building walls, throwing up banks, and, amongst other oppressions, in raising the vast pyramids in question. We may add to this, that no time seems more likely for the Egyptian kings

to

to undertake such amazing structures, than when they had so many hundred thousand slaves in their dominions, whom it was political to keep in action, to divert them from mutiny and rebellion.

AFTER all, it must be confessed, that there is little agreement either among the natives of Egypt, or ancient historians, with respect to the founders of these pyramids; and, as this is a matter of uncertainty, it would be in vain to endeavour to determine the time when they were erected. However, if we do not allow them to be so ancient as the time of the Israelites being in Egypt, (which yet does not appear improbable) we must grant them to be above three thousand years old; for Herodotus, who lived two thousand two hundred years ago, could find little satisfaction in his inquiries concerning them; and Diodorus, who lived before the birth of Christ, supposes the great pyramid to have been built at least a thousand years before his time.

ANOTHER thing disputed is the end for which these pyramids were built; though the generality of writers on this subject are of opinion that they were intended for sepulchral monuments. Diodorus confirms this hypothesis, and Strabo supposes all those near Memphis to be royal sepulchres. And yet some think it not improbable, from the sumptuous apartments, galleries, benches, &c. that they were designed for other uses than mere sepulchral monuments, which are commonly plain arched vaults; perhaps for temples, as Dr. Shaw imagines; for, as the whole Egyptian theology was couched in mysterious emblems and figures, no places could be better contrived for the adyta*,

* By this word is meant a secret or retired place in the pagan temples, where oracles were given, and into which none but the priests were admitted.

which

which had so great a share in their mysteries. Besides, those chests which have been supposed to have been the coffins wherein the bodies were deposited, chiefly because they are about six feet long, the length of a man, may rather have been designed to inclose some of the priestly vestments, or sacred utensils, or some of their idols, &c. especially considering they are of an oblong square figure, and not narrower at one end, which was the common form of coffins; and then the depth and breadth of these, which is about three feet, are out of all proportion, as Dr. Shaw observes. However, there is another reason to think these huge structures were designed for sepulchres, arising from the theology of the Egyptians, who not only believed the resurrection, but that, as long as the body endured, the soul continued with it. Hence it was that they took so much care to embalm their dead, in order to preserve them from corruption, that so the souls of the deceased might long remain about their respective bodies, not to animate or quicken them, but only as attendants or guardians, unwilling to leave their former habitations: And upon the same account they deposited them in the most durable buildings, endeavouring thereby, as far as they were able, to render them eternal.

THE reason why the Egyptians built these monuments, in a pyramidal figure, seems to have been, according to Mr. Greaves, because this is the most permanent form of structure, being neither over-pressed by it's own weight, nor so subject to the sinking in of rain as other buildings. Add to this, that they might thereby intend to represent their deities, it being customary among the heathens to express the objects of their worship either by columns fashioned like cones, or by quadrilateral obelisks, which are a lesser sort of pyramids,

mids, and of which ſeveral are ſtill ſtanding intire in divers parts of Egypt.

How theſe wonderful ſtructures were built, and by what means the ſtones, eſpecially thoſe vaſt ones of the firſt pyramid, were raiſed to ſuch a height, has likewiſe been matter of much ſpeculation. Herodotus, whoſe expreſſions are a little obſcure, ſuppoſes, that, when they had laid the firſt range, they raiſed others thither from the ground, which formed the ſecond row; and, by an engine placed upon that, they drew up the ſtones that compoſed the third; there being as many engines as layers of ſtone, or elſe one that might be occaſionally removed. Mr. Greaves imagines, that they firſt built a large tower, the height of the intended pyramid, to the ſides whereof they applied the reſt of the ſtructure, piece after piece, like ſo many buttreſſes, which leſſened in height till they came to the loweſt degree. Some have conjectured, that they took the advantage of building round a hill; if ſo, theſe pyramids were built with much leſs labour and expence than is generally imagined. In ſhort, in a matter of ſuch uncertainty, every one muſt be left to his own conjectures; but, as to thoſe already mentioned, they appear liable to various objections: Nor does there ſeem any reaſon for endeavouring to leſſen the difficulty of erecting theſe prodigious ſtructures, ſince the wealth of the Egyptian monarchs, and the number of hands employed, were undoubtedly equal to the undertaking, though confeſſedly great and wonderful*.

AT

* Diodorus tells us, that the number of men employed in building the firſt or greateſt pyramid was 360,000, large bodies

AT a ſmall diſtance from the ſecond pyramid ſtands a monſtrous figure, uſually called a Sphinx, which the ancients repreſented as having the head and breaſts of a woman, the wings of a bird, the claws of a lion, and the body like a dog. This figure the Egyptians uſed in their hieroglyphics to repreſent a harlot, intimating the danger of being captivated with the beauty of a faithleſs woman, whom the fond lover in the end finds as cruel and rapacious as a lion. Of this Sphinx, however, there is little more to be diſcerned at preſent than from the ſhoulders upwards, being a huge buſt of a woman, all cut out of the ſolid rock, except the upper part of the head, which ſeems to have been a ſeparate ſtone. It's height is almoſt thirty feet, and the breadth is much the ſame at the lower part of the neck, or beginning of the breaſt. It is fifteen feet from the ear to the chin, and we may ſuppoſe the other parts of the figure are proportionable; but the ſand is ſo accumulated round it, that one can but juſt diſcover the top of the back, wherein there is a hole about five feet long, ſeventy-five feet (according to Dr. Pococke) from the hinder part of the neck, and thirty from the tail. Beſides this hole in the back, there is another on the top of the head, into which a full-grown perſon may deſcend, and from whence it is ſuppoſed the artful prieſts uſed

---

dies of them relieving one another at ſtated periods, and alternately taking their turns of reſt and labour. It is agreed that twenty years were ſpent from the beginning to the finiſhing of the work; and Herodotus adds, that in his time there was an inſcription on the pyramid, declaring how much had been expended only in radiſhes, onions, and garlic for the workmen, being no leſs than ſixteen hundred talents of ſilver, or about 400,000l. ſterling; from whence we may judge to what vaſt ſums the whole expence muſt have amounted.

to

to deliver their oracles. Some travellers have alſo imagined, that there is a ſubterraneous communication from the Sphinx to the largeſt pyramid; but this ſeems to be mere conjecture. This rock is dug away all round the Sphinx to a conſiderable diſtance, which was undoubtedly employed in building the pyramids. Pliny makes mention of this Sphinx, and tells us it was thought to be the ſepulchre of king Amaſis.

IN the plain in which the laſt pyramids are placed, are the famous catacombs or mummy-pits, of which travellers give us the following deſcription: Thoſe who have the curioſity to viſit theſe pits, where the mummies or embalmed bodies are depoſited, are let down by ropes, into a kind of wells about four feet ſquare, cut through a flaty rock, covered with ſand, which, being moved by the wind, ſometimes fills up theſe entrances. Some of the pits are twenty or twenty-five, and others thirty feet deep; but ſeveral of them are caſed, as far as the depth of the ſand, with large unburned bricks. At the bottom there are horizontal paſſages which lead into ſquare rooms, in which are found the remains of embalmed bodies, ſwathes ſcattered up and down, and ſometimes cheſts and coffins ſtanding upright and intire, which are made of ſycamore or Pharaoh's fig-tree, as we have already obſerved, and have continued ſound in theſe ſubterraneous apartments above three thouſand years, notwithſtanding the wood is ſpongy and porous to outward appearance. The top of the coffin is commonly ſhaped like a head, with a face painted upon it reſembling a woman; the reſt is one continued trunk, and the bottom is broad and flat, upon which it ſtands upright in the repoſitory. Moſt of theſe coffins are adorned with hieroglyphics, and ſome of them

are finely gilt and painted, either with the figure of ſome tutelar deity, or that of the deceaſed. Little images of various kinds, ſome of copper, others of ſtone, are ſometimes ranged round the pedeſtals of the coffins, as if deſigned for ſo many guardian genii and attendants.

THE bodies, upon opening the coffins, appear wrapped up in a linen-ſhroud, upon which are faſtened ſeveral ſcrolls, (likewiſe of linen) painted with hieroglyphic characters. Theſe ſcrolls commonly run down the belly and ſides, or elſe are fixed on the knees and legs. On a kind of head-piece of linen, which covers the face, the countenance of the perſon is repreſented in gold; and the feet have alſo a covering of the ſame, ſhaped like a ſlipper, and painted with hieroglyphics. The whole body is ſwathed with fillets, or narrow bandages of linen, which are wrapped round in ſuch a curious manner, with ſo many windings, and ſo often one upon another, that it is ſuppoſed a corpſe has ſeldom leſs than a thouſand ells of filleting. Thoſe eſpecially about the head and face are laid on with wonderful neatneſs, inſomuch that the ſhape of the eyes, noſe, and mouth are plainly perceived. The breaſt is alſo covered with folds of linen cut ſcollop-wiſe, richly gilt and painted; and ſometimes we ſee the figure of a woman with her arms extended, the wings of fowls, or other ornaments.

IT is to be obſerved, that the mummy-cheſts or coffins are not always of wood, ſome few being of ſtone; and, of the wooden ones, ſome are made of boards, and others hollowed out of one piece of timber. There are alſo ſome bodies that have no other coffins than pieces of linen gummed or glued together, which yet are as durable as thoſe of wood or ſtone; and there are others which have

have no coffins at all, but are wrapped up in reeds or branches of palm. These last, we may imagine, were the poorer sort of people, whose families could not bear the expence of coffins; and it is probable they were piled one upon another, whereas the coffins stood upright upon their pedestals.

SOME travellers make mention of several square boxes that are found in these catacombs, usually painted with hieroglyphics, and having upon their lids the figure of a hawk, a dog, or other animal. One of these boxes, they say, was originally placed at the feet of each mummy, and contained various little instruments and utensils, denoting the trade or employment of the embalmed person. But most of these have been carried away, as well as the little images above-mentioned, which the people of Saccara sell to the Europeans at an easy rate; for the Turks have little curiosity, and esteem antiquities no farther than the value of the materials.

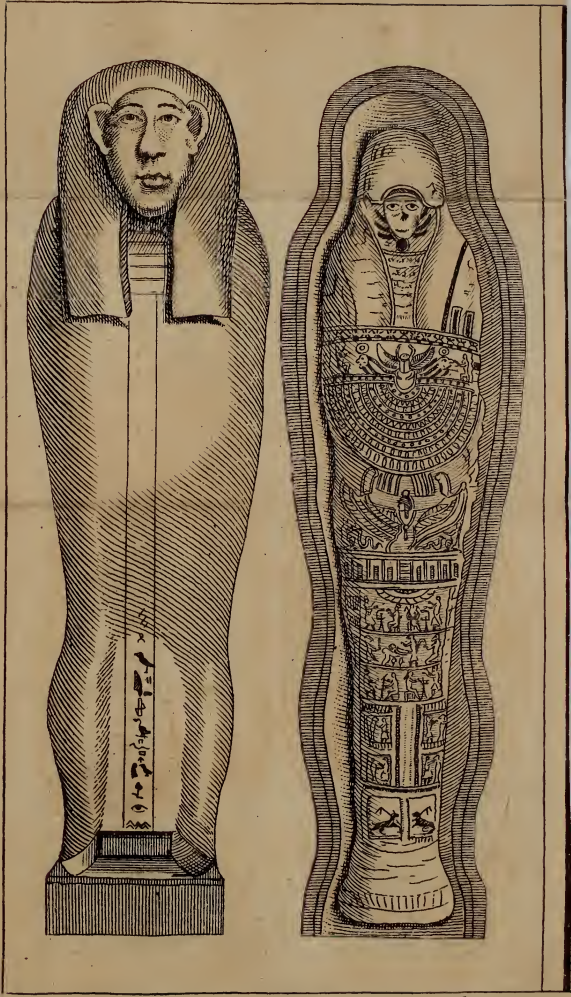
AMONGST these repositories of human bodies, there is one called the Pit of the Birds, about thirty feet deep, consisting of many handsome apartments, being the sepulchre of birds and other animals worshipped by the ancient Egyptians, which they embalmed and wrapped up with the greatest care, depositing them in earthen vases covered over and stopped close with mortar. The form of these vases or urns is conical, and most of them contain an ibis (a bird much reverenced by the Egyptians, as we have already observed) whereof the bill, bones, and the very feathers are preserved to admiration. Dogs and other animals have been found in larger vases, but at present they are rarely to be met with.

PERHAPS it will not be disagreeable to the reader, nor seem quite foreign to our purpose,

if to this deſcription of the mummy-pits we ſubjoin an account of the Egyptian manner of embalming human bodies, by which curious art ſeveral have been preſerved intire through ſuch a long ſucceſſion of ages. For what we know on this ſubject we are chiefly indebted to Herodotus and Diodorus, who inform us, that among the ancient Egyptians the art of embalming, like other trades, was profeſſed by particular perſons; and, when a corpſe was brought to them, they ſhewed the friends of the deceaſed ſeveral models or patterns made of wood, painted like an embalmed body, giving them alſo an account of the expence that would attend each manner of preparation; for it is to be obſerved, that they had three different ways of preparing a corpſe for burial, one of which was very expenſive, amounting to upwards of two hundred and fifty pounds ſterling, the ſecond to about a fourth part of that ſum, and the charge of the third was very little.

THESE matters being previouſly agreed on, the embalmers took the body, and, having drawn out the brains through the noſtrils with a crooked iron inſtrument, they injected into the vacancy a certain compoſition, which, at this day, upon opening the head of a mummy, appears of the conſiſtence, colour, and ſmell of pitch, but ſomething more fragrant. Then the ſcribe or ſecretary (as he was called) made a mark on the belly to determine the length of the inciſion, which was made with a ſharp ſtone; and the inteſtines being drawn out, except the heart and, kidneys, were waſhed with palm-wine and aromatic odours. The belly was then filled with pounded myrrh, caſſia, and other odoriferous drugs; and the inciſion being ſewed up, the body was carefully anointed with oil of cedar for above thirty days, or elſe laid for more

Mummies Vol IV. p. 268.



An Egyptian Mummy.

more than twice that time in nitre*. Seventy dayswas the longeſt time, which being expired, the whole body was waſhed again, bound up in ſwathes of fine linen, and covered with gums, which the Egyptians uſed inſtead of glue. All this was done (as we have hinted above) with ſuch inimitable art, that the body was not in the leaſt disfigured, the hair remained on the brows and eye-lids, and the perſon might even be known by his countenance. The corpſe was then delivered to the relations, and, being incloſed in a coffin, was depoſited in a ſepulchre, or in ſuch catacombs as we have deſcribed. The Egyptians however did not always bury their dead immediately after they were embalmed, but ſometimes kept them in their houſes in magnificent apartments, having by this means the ſatisfaction of viewing the lineaments of their anceſtors, who died ſome ages before them; and according to Lucian, who pretends to have been an eye-witneſs of what he relates, they often brought the embalmed body of a friend as a gueſt to their feaſts and entertainments. Neceſſitous perſons, we are told, have ſometimes pawned the bodies of their parents or brothers for money, but Diodorus ſays it was reckoned the greateſt reproach not to redeem them, and thoſe who neglected to do it were themſelves deprived of burial.

* Dr. Grew, in his Muſæum Regalis Societatis, is of opinion that the Egyptians boiled their dead bodies in a large cauldron, with a certain kind of liquid balſam. His reaſon is, that, in the mummies preſerved in the collection of the Royal Society, the balm has penetrated not only the fleſhy parts, but even the very bones, ſo that they are all black as if they had been burnt.—The Peruvians (it ſeems) had an effectual method of preſerving the bodies of their deceaſed yncas or kings. Their main ſecret is ſuppoſed to be in burying them in ſnow, and afterwards applying a certain bitumen, mentioned by Acoſta, which kept them as intire as if they had been ſtill alive.

THE method of embalming above described was the moſtly coſtly of any; but thoſe whoſe circumſtances would not admit of ſuch an expence had recourſe to a more ordinary preparation. Without cutting the body open, they injected into it by a pipe a quantity of oil of cedar, laid it in nitre, and after a certain term they let out the oil by the fundament, which brought away with it the paunch and entrails. The third way of preſerving a corpſe was only to cleanſe the belly by injected lotions, and ſalt the body for ſeventy days; and this was practiſed by the meaner ſort of people.

THE pyramids and catacombs are perhaps the moſt remarkable curioſities of Egypt, and therefore we have been the more particular in deſcribing them; but there are ſeveral other noble remains of antiquity, which muſt not be paſſed over in ſilence. Near the ſouthern part of the lake of Mœris, of which we have lately given ſome account*, was ſituated the celebrated labyrinth, a ſtructure which, in the judgment of Herodotus, who ſaw it, ſurpaſſed the report of fame, and was more wonderful than the pyramids themſelves. This magnificent pile, the ſame hiſtorians inform us, was erected by twelve Egyptian kings, at a time when the country was divided into ſo many different kingdoms, and, properly ſpeaking, conſiſted of twelve palaces, where the princes and magiſtracy of the whole nation uſed to aſſemble to feaſt and ſacrifice, and to deliberate about matters of ſtate and religion. It ſeems alſo to have been deſigned as a Pantheon, or univerſal temple of all the Egyptian deities, which were ſeparately worſhipped in the provinces.

* See p. 210. of this Volume.

THIS

THIS vaſt edifice had twelve halls, which were vaulted, and had an equal number of doors oppoſite to each other, ſix opening to the north, and ſix to the ſouth. The whole number of rooms in it was three thouſand, one half of them above-ground, and as many below; and the paſſages throughout the building were contrived to meet and croſs each other with ſo much intricacy, that a ſtranger was preſently bewildered amongſt them, and unable to find his way out without the aſſiſtance of a guide. Herodotus tells us that he viewed all the upper rooms of this labyrinth, but was not permitted to ſee the ſubterraneous apartments, becauſe they contained the ſepulchres of the kings who built it, and of the ſacred crocodiles, which animal was the peculiar deity of Arſinoe, a neighbouring city*. This huge fabric is ſaid to have conſiſted intirely of ſtone, without any timber, being ſupported by a vaſt number of marble pillars, and the whole adorned with excellent ſculptures.

SO great was the ſtrength of this ſurpriſing ſtructure, that Pliny ſays it was remaining in his days, after having ſtood three thouſand ſix hundred years; and even at preſent one may find ſufficient tokens of it's ancient grandeur. At a place called Caroon, which is undoubtedly the ſpot where the labyrinth was erected, there are ſeveral

* The ſuperſtition of the ancient Egyptians is well known, who extravagantly worſhipped the crocodile, the bull, the wolf, the dog, the cat, the baboon, the hawk, the ibis, and many other animals; almoſt every province and city having their peculiar deities. Theſe animals were placed in their temples, maintained with great care and expence, and after their death were embalmed, and depoſited in tombs aſſigned them by the public.

heaps of ruins covered with ſand, abundance of ſtones ſcattered up and down, and proceeding farther we come to the remains of ſome ancient buildings, the largeſt of which, called the Caſtle of Caroon, is about a hundred and ſixty feet long, and eighty broad, ſuppoſed to have been the ſquare pyramid which Strabo ſpeaks of at the end of the labyrinth.

THERE are ſome remnants of large marble pillars, which ſupported a very ruſtic portico almoſt intirely deſtroyed; but through it we paſſed into a fine ſpacious hall, and beyond it three others ſucceſſively, which are roofed with large tables of marble admirably joined together, and reaching acroſs from one wall to the other. From theſe halls there are openings into other rooms upon a level with them, and from thence there are ſtaircaſes to aſcend into thoſe that were above, and to deſcend into thoſe below; but moſt of the paſſages, as is reaſonable to ſuppoſe, are now choaked with ſand and rubbiſh. What remains of this ſtructure is about four and thirty feet high, and there is the appearance of a cornice running along it, though undoubtedly it was higher formerly. It ſeems to have been a fourth part of the inner building, which probably had four fronts, with twelve halls anſwering to them; and this is almoſt evident from the ruins ſpread all round it to a conſiderable diſtance.

AT a ſmall diſtance to the northward of Cairo is the village of Baalbait, ſeated on an artificial eminence, on which is ſuppoſed to have ſtood the city of Buſiris, once celebrated for it's temple dedicated to Iſis; there being the remains of a temple, the materials of which ſeem to have been more coſtly than any in Egypt. From theſe ruins the temple appears to have been about a hundred

feet

eet broad, and two hundred long. The outside of this edifice was of grey granite; and the inside and columns of red, the capitals being the head of Isis. There seem to have been four rows of twelve columns each in the temple; but what is most admired, is the exquisite beauty of the sculpture with which it is adorned; for, though the figures are only about four feet high, there appears something so fine and so divine in the mien of the deities and priests, that exceeds imagination. But the natives, who are intirely void of taste, are constantly employed in destroying these fragments of antiquity, and frequently cut the columns, in order to make them into mill-stones.

NEAR Cairo are also the remains of the ancient city of Heliopois, the Or of the Scriptures, a city famous for the worship of the Sun. At the entrance on the west, are the ruins of a Sphinx of bright yellow marble; and, almost opposite to the gate, is an obelisk sixty-seven feet and a half high. The priests of this city were once the most famous of all Egypt for their skill in philosophy and astronomy. At a little distance from the above obelisk is the village of Matarea, where it is said the holy family lay for some time concealed, when they came into Egypt; and they add, that, being in danger from some bad people, a tree opened, and became hollow, to receive and shelter them. The Coptics even pretend to shew the very tree, which is hollow, and of the sort called Pharaoh's fig; they even take away pieces of it as sacred reliques, though the Romans say that the tree fell down, and was carried away by the monks of Jerusalem.

ON the side of a mountain farther to the south are some remarkable antiquities. After an ascent, which takes up two hours, you arrive at a gate leading into a great saloon, supported by hexagonal pillars, cut

out of a solid rock. The saloon was adorned with paintings, which are still to be distinguished, and the gold that was employed, glitters on all sides. There are openings to other apartments, but they are filled up with rubbish; and also an apartment above the saloon, which may be entered by climbing up on the outside; but it is smaller than the first; and, though it has no pillars, has been painted like the other.

FARTHER to the south is Gaua-Kiebra, where are still to be seen the remains of a beautiful portico of a temple, consisting of eighteen pillars, in three rows; these have a singular kind of capital, and their shafts are covered with hieroglyphics, executed in a most masterly manner. This temple seems to have been extremely magnificent, not only from the noble appearance of the portico, but from the vast stones, of which the walls were formed: one of these Dr. Pococke found to be twenty-one feet long, eight broad, and four deep; and another thirty feet in length, and five in breadth.

STILL farther up the Nile was the city of Tentyra, where the inhabitants paid their adoration to Venus and Isis; and, from the many heaps of ruins still to be seen, the city appears to have been of great extent. The principal remains of the ancient buildings are near each other; these are two gates and four temples. The great temple appears to be that of Isis, which seems in a manner intire. The pillars are adorned with large capitals of the head of Isis, each capital having four faces, one on each side; and over them are compartments in basso relievo, finely executed, and in a noble taste. At the end of the grand room are four stories of hieroglyphics, in seven compartments; each of which has two or three human figures, but some of them are defaced. There are likewise four stories of hieroglyphics on the outside; and before the ground was raised, there were

were probably five both within and without. At the ſouth end are five coloſſal figures; and two more beautiful than the reſt ſtand at each corner.

THE ruins of the celebrated city of Thebes are the moſt conſiderable in Egypt; and are generally known by the name of the antiquities of Luxerine and Carnack, two villages ſeated in the midſt of theſe ruins. The great city of Thebes extended on both ſides the Nile, and was built, according to ſome authors, by Oſiris, and according to others by Buſiris II. who adorned it with magnificent buildings, and is ſaid to have rendered it the moſt opulent city upon earth. It was firſt called Dioſpolis, or the city of Jupiter, but afterwards obtained the name of Thebes. According to Diodorus Siculus, both this king and many of his ſucceſſors improved the city with preſents of gold, ſilver, ivory, and a multitude of coloſſal ſtatues; and no other city was ſo adorned with obeliſks of one intire ſtone. It had four temples of amazing ſize and beauty; the moſt ancient of which was thirteen ſtadia in circumference, forty-five cubits in height, and the walls twenty-four feet in thickneſs. The buildings, he adds, have remained till modern times, but the gold and ſilver, the ivory and precious ſtones, were carried away by the Perſians when Cambyſes ſet fire to the temples of Egypt. The Perſians having transferred this opulence to Aſia, and, carrying artiſts with them from Egypt, erected the magnificent palaces of Perſepolis, Suſa, and others in Media. The riches of Egypt were then ſo great, that it is ſaid, after plundering and burning the city, there were taken from the ruins above three hundred talents of gold, and two thouſand three hundred talents of ſilver. Of the four remarkable temples mentioned by Diodorus, Dr. Pococke, biſhop of Oſſory

in Ireland, imagines, that which he viewed, was the ſame which that ancient hiſtorian mentions as of a moſt extraordinary ſize, ſince it's ruins extend near half a mile. This temple has eight grand entrances; to three of which were avenues of a great length, between ſphinxes; two of theſe avenues having ſixty of theſe ſtatues on each ſide. Having paſſed between theſe, at one of the entrances you come to four grand gates, at a conſiderable diſtance behind each other, in a direct line to the temple; they are about thirty-five feet deep, a hundred and fifty in length, and, before the ground was raiſed, muſt have been from fifty to ſixty feet high. Theſe gates are of a pyramidical form: the firſt is of red granite, finely poliſhed, and beautifully adorned on the outſide with hieroglyphics, in four ſeries, from the top to the bottom, and three on the inſide; in each of which are the figures of two men, finely executed, and bigger than the life. Farther on each ſide are coloſſal figures, about fifteen feet high, with hieroglyphics under them; and, in this laſt manner, the other gates are adorned, but without the compartments. On each ſide of theſe gates, there alſo ſeem to have been coloſſal ſtatues. The grand entrance to the weſt, which may be termed either a gate, or a front to the great court before the temple, is extremely noble, though it has the greateſt plainneſs and ſimplicity; and nearly reſembles what among us is termed the ruſtic; it is forty feet broad, and the bottom is a ſolid wall of that thickneſs. In the front are two ſtories of ſmall windows, but the upper ſtory is ſo ruined, that, at a diſtance, it has, in many parts the appearance of battlements. Within this gate is a large, open court, which has a terrace eighty feet broad, and ſix feet above the ground, as it is now raiſed; to

which

which there were probably ſteps to aſcend from a colonade on each ſide of this anti-temple. The pillars, of theſe colonades have ſquare capitals, and on each ſide of the middle walk to the inner part of the temple, was a grand colonade of pillars above forty feet high, and eight feet in diameter, with large capitals like vaſes, worked with figures in lines. At the farther end of this colonade, are two mutilated coloſſal ſtatues of red granite, with the heads broken off.

NOTWITHSTANDING the wall of the inner temple is greatly ruined, in Dr. Pococke's opinion, it has more grandeur and magnificence than any other building he ever ſaw. The door is very lofty, and yet in a juſt proportion; and the walls on each ſide are adorned with hieroglyphics and the figures of men, in ſix compartments, above nine feet high, and twelve wide; every compartment having the figures of three men. On entering the inner temple there appear ſixteen rows of pillars one way, and eighteen another: thoſe in the two middle rows are eleven feet in diameter, and the others eight, with capitals of ſquare ſtone. The temple was higher above the middle rows than in the other parts, and had a kind of windows over the ſpace between every two pillars, with twelve lattices of ſtone in each window. Every part of the temple, both within and without, is covered with hieroglyphics; and, on the outſide to the north, are the repreſentations of battles in relievo, with horſes and chariots, one of which is drawn by ſtags. On each ſide of the entrance into the eaſt end of the temple, is an obeliſk ſixty three feet four inches in height, and ſix feet ſquare. Farther to the eaſt are two obeliſks ſeventy-three feet high, and ſeven feet ſix inches ſquare; but one

one of them is fallen down. These obelisks are all of red granite, covered with hieroglyphics.

IN that part of Thebes, on the west side of the river, is a village named Gournou, where there is a very singular street; for the rocky ground, rising on each side of it, about ten feet high, has, on each hand, a row of rooms, some supported by pillars, without the least sign of raised buildings. Hence Dr. Pococke imagines that, in the earliest times, these caverns might serve as houses, and were probably the first invention after that of tents, when they might be contrived as a better shelter from the weather, and the coldness of the nights: but it may at least, with equal probability be supposed, that the use of caverns preceded that of tents, and that the latter were chosen only by those, who for the sake of pasture, removed with their flocks, from place to place.

ON passing through some other vallies, where the mountains rise to a great height, you come to a round opening like an amphitheatre; and ascending it by a narrow steep passage, arrive at the sepulchres of the kings of Thebes, which are formed in the rocks. Here are long galleries, or passages formed under the mountains, out of a close white freestone, that cuts like chalk, and is as smooth as the finest stucco work. There are generally four or five of these galleries one within another, from thirty to fifty feet long, and from ten to fifteen feet high, leading to a spacious room, in which is the king's coffin, with his figure cut in relievo, or painted upon it, at full length. Both the cielings and sides of the rooms are carved with hieroglyphics of beasts and birds; some of them painted, and almost as fresh as if they were but just finished, though they are undoubtedly above two thousand years old. One of these sepulchres,

in

in particular, is moſt beautifully adorned with hieroglyphics, cut in the ſtone, and painted. The entrance, which has a deſcent, is, for thirteen feet, open at the top; then, for eight feet more, the cieling inclines, anſwering to the deſcent under it. The hieroglyphics, carved on each ſide, are firſt in a kind of compartments next to the cieling, in the manner of a frieze. Below them are carved figures repreſenting mummies; and under theſe are hieroglyphics divided by lines into different columns. In the middle of the cieling are the figures of men, with ſtars on each ſide. The king's tomb is of one ſtone of red granite, ſeven feet nine inches high, eleven feet eight inches long, and above ſix broad, the cover being made to ſhut into it. The figure of the king is cut in mezzo relievo, with an hieroglyphic inſcription; and the room is adorned with different columns of hieroglyphics. In a large room belonging to another of the grottoes, is the ſtatue of a man with a ſceptre in his hand, and on the cieling is painted a large figure of a man, holding a particular kind of ſceptre, his wings covering his whole body, and hanging lower than his feet. On each ſide of the in entrance are four men above the natural ſize, cut the ſtone, with the heads of hawks and other animals.

THERE are likewiſe two very extenſive apartments on the ſouth ſide of theſe mountains: to one of them is a deſcent of ten ſteps to a ſpacious area cut in the rock, which leads to a room ſupported by ſquare pillars, alſo cut out of the ſolid rock; and beyond it is a long room ſupported by pillars on each ſide. The apartments are adorned with hieroglyphics, but they are in ſome places black, and ſcaled, as if damaged by fire.

To

To the south-east are the ruins of a large temple; and, at a distance from it, the remains of a pyramidal gate, and of a colossal statue broke off about the middle. The part fallen down is twenty-one feet broad at the shoulders, from the top of the head to the bottom of the neck is eleven feet, and the ear is three feet in length. In the first court of the temple, are two rows of square pillars, on each side of which is a statue, with their heads broken off. In a second court are the remains of two colossal statues sitting; they are of black granite, and the head of one of them, which lies on the ground, is three feet five inches long. A great number of pillars belonging to the temple are still standing, and many others are destroyed. There are two sorts of pillars in this edifice, one more beautiful than the other. At a distance their thickness and solidity give them a noble appearance; and, on approaching them, the eye is entertained with the hieroglyphics, and, when you are near them, their colours have a fine effect. This sort of painting has neither shade nor degradation: the figures are encrusted with it like painting in enamel; and according to Mr. Norden, it surpasses, in strength, every thing he had seen of the kind, it being superior in beauty to mosaic work, with the advantage of being more durable. It is surprising to see, says he, how the gold, ultra-marine, and other colours, have preserved their lustre to the present age.

FRONTING the Nile, at a considerable distance from the temple, are the colossal statues of Memnon, consisting of a man and woman in a sitting posture, both of them fifty feet high from the bases of the pedestals to the top of their heads. They are seated upon stones fifteen feet high, and as many in breadth; but the back part of each stone is higher

higher than the fore part by a foot and a half; and they are placed on plain pedeſtals two feet high. The ſtatue to the north has been broken off in the middle, and been built up with five tiers of ſtone, but the other is of one ſingle ſtone: the feet have the toes broken off, and the features are mouldered away by time. The ſides of their ſeats are covered with hieroglyphics. On the pedeſtal of the ſtatue, which has been broken, is a Greek epigram; and on their inſteps and legs are ſeveral Greek and Latin inſcriptions; ſome of theſe epigrams in honour of Memnon, but moſt of them are the teſtimonies of thoſe who have heard his ſound: one of them being thought the famous ſtatue of Memnon, which, at the firſt and ſecond hour, it is pretended, uttered a ſound, occaſioned by the rays of the ſun ſtriking upon it. At a ſmall diſtance are the ruins of ſeveral other ſtatues, particularly one of yellow granite, almoſt intire, and twelve feet in length from the thigh to the top of the head.

AT Luxerein, which as hath been obſerved, is alſo a part of the ancient Thebes, are the remains of a large and magnificent temple, called by Diodorus the ſepulchre of Oſymandus: it is ſeated on the eaſt ſide of the river to the ſouth of the antiquities juſt deſcribed. On approaching it, you come to two obeliſks, probably the fineſt in the world, they being at preſent ſixty feet high, and might have been ſeventy or eighty, the ground being much raiſed. The hieroglyphics extend in three columns down each ſide, and the granite has perfectly retained it's poliſh, which is as fine as can be imagined. On the top of each ſide, a perſon ſits on a throne, and another offers him ſomething on his knees. At a ſmall diſtance is a pyramidal gate two hundred feet long, and at preſent fifty

fifty-four above the ground, with a coloſſal ſtatue on each ſide, which riſes thirteen feet and a half above the ſurface of the earth, though the ſhoulders are only three feet and a half above the ground. In the front of the pyramidal gate are windows and ſculpture, particularly a perſon ſeated on a throne holding out one hand, in which he has a ſtaff or ſceptre, ſurrounded by others in ſuppliant poſtures. On the other ſide is repreſented a man in a carr, galloping and ſhooting with a bow, and followed by many chariots. Within the gate is a court almoſt filled with cottages, with ſome pillars that once formed part of a colonade, beyond which was another gate now in ruins, that opened into another court, in the middle of which was a large and beautiful altar, and the hiſtory of the king cut all round in the walls. The pillars in this court are forty feet high, but the work in the capitals, inſtead of being in relief, is only cut out in lines. The walls of the rooms are adorned with ſculpture, among which, a deity is repreſented carried in a kind of boat, by eighteen men, preceded and followed by a perſon holding a particular kind of enſign. Here are alſo a perſon ſitting and another kneeling to him, with inſtruments of muſic; a man leading four bulls with a ſtring, and men kneeling with the heads of hawks.

THERE are many other ruins farther up the Nile; particularly at Eſne are the remains of a magnificent temple cloſed on three ſides, with twenty-four pillars in the front, that ſeem well preſerved, and, as well as the temple itſelf, are covered with hieroglyphics. It is remarkable that, among all the pillars of this temple, there is not one capital that reſembles another; for though the proportions are the ſame, the ornaments are different. About three miles from this temple is another

ther which Dr. Pococke ſuppoſes to be the temple of Pallas at Latopolis, where both that goddeſs and the fiſh Lotus were worſhipped. There are here alſo ſeveral different kinds of capitals, ſome of which reſemble the Corinthian, but have a very flat relief. This ſtructure is likewiſe adorned with hieroglyphics, and the cieling, which is ſtill ſtanding, is embelliſhed with a variety of animals, painted in very beautiful colours; and among them is a man ſitting in a kind of boat, with a circle round him.

AT Etfou, where once ſtood the city of Apollinopolis is a noble temple, which was dedicated to Apollo; and a grand pyramidal gate, which the Turks have converted into a citadel.

AT the village of Comombo, ſtill farther to the ſouth, are ſome beautiful ruins, which it is impoſſible for a curious traveller to view without great ſatisfaction. A noble building reſts upon twenty-three well wrought pillars, adorned with hieroglyphics. The ſtones that cover the top, are of a prodigious ſize, and the pillars above twenty-four feet in circumference; but part of the building is covered with earth, and three quarters of the pillars under ground.

FARTHER up the Nile is the iſland Elephantine, in which was a ſmall city of the ſame name. In the midſt of the iſland are the remains of a magnificent gate of red granite finely adorned with hieroglyphics; and among other buildings is an ancient edifice ſtill called the temple of the ſerpent Cnuphis, though covered with earth on the top, as well as on the ſides.

FARTHER to the ſouth is the iſland of Philoe, which is high, but of ſmall extent. Diodorus ſeems to inſinuate, that none but the prieſts were permitted to land, on account of the ſacredneſs of

of the place; accordingly the whole island appears to have been walled round, somewhat in the manner of a modern fortification. The temple of the Hawk is built with free-stone on the west side of the island; and in the court of the temple, which is of great length, is a row of pillars on each side, adorned with a variety of capitals. Beyond this is an inner court, in which are beautiful pillars, with capitals wrought in basso relievo, with some thing like leaves and branches, above which is the head of Isis on each of the four sides. On the outside of this inner court, are large colossal figures, on the south side of a great pyramidal gate. At the entrance to the east is on each side an obelisk of red granite, and near each of them a lion. Between the west side of the grand area and the water, is only a narrow terrace, with doors to it from the portico; and the whole ends at the water to the south with a parapet wall, at which are two obelisks raised on their pedestals. Here the island rises twenty or thirty feet above the water, affording a prospect to rocks of granite, where the Nile turning, those rocks terminate the view in a most agreeable and romantic manner. To the east of this structure is the temple of Isis, which is an oblong square building, open on all sides; where the capitals of the pillars, which have some resemblance to those of the Corinthian order, may be reckoned among the most beautiful in Egypt.

AMONGST the curious remains of antiquity to be seen in Egypt we must not forget those of Alexandria, particularly Pompey's pillar, which is a hundred and fourteen feet high, and has a Corinthian capital. The shaft which is nine feet in diameter, and ninety in height, is of one intire stone, and the base and pedestal of another. It stands on a foundation consisting of several pieces

of

of ſtone and marble, ſome of which have been dug away, in expectation perhaps of finding ſome treaſure; but our lateſt travellers ſay that theſe defects in the foundation have been repaired.

THE catacombs of Alexandria are alſo taken notice of as a great curioſity, being ſeveral apartments cut out of the rock, on each ſide of an open gallery, wherein there are three rows of holes to depoſit the dead bodies. The king's palace, with it's ſuburbs, which took up one fourth part of the city, incloſed, among other things, the muſæum or academy, the royal ſepulchres, and the tomb of Alexander; all which are now gone to decay, and the ſtones carried off to build other parts of the city. The moſt conſiderable building now remaining is the palace of Cleopatra, of which ſome ſtately galleries are ſtill ſtanding, together with a tower of white marble reſting on an arch or vault, wherein are to be ſeen ſeveral niches adorned with columns of marble.

THE ciſterns, which were built under the houſes of Alexandria, to receive the waters of the Nile, brought by a canal from the canopic branch, are many of them intire, and ſtill ſerve for the ſame purpoſe. The iſland of Pharos, on which ſtood the celebrated watch-tower or light-houſe of the ſame name, which was reckoned one of the wonders of the world, is now joined to the continent. This famous ſtructure had ſeveral ſtories raiſed one over another, adorned with columns, baluſtrades, and galleries of the fineſt marble and workmanſhip; to which, it is ſaid, the architect had faſtened looking-glaſſes, wherein one might ſee the ſhips ſailing on the ſea at a great diſtance. But inſtead of this noble fabric there is now an irregular caſtle without ditches or out-works of any ſtrength, out of the midſt of which riſes a tower that ſerves for

for a light-houſe, but which hath nothing of the beauty and grandeur of the old one. This caſtle is ſituated at the entrance of the New Port, and ſome pillars are diſcernible thereabouts at the bottom of the water, which perhaps are the remains of the ſuperb ſtructure above-mentioned.

AMONGST other antiquities we alſo ſee two obeliſks, one of which is broken, part of it lying on the ground. The patriarchal chair, in the church of the Coptic convent, is a thing generally ſhewn to ſtrangers; and the Greeks boaſt of their being poſſeſſed of the ſtone on which St. Catharine ſuffered martyrdom, with other curioſities of the ſame nature.

ALEXANDRIA was once equal to the beſt cities in the world, not only for it's noble walls, but for the number of it's magnificent edifices, the remains of which are ſufficient tokens of it's ancient grandeur. The outer walls round the old city have pretty well eſcaped the injuries of time, and appear to be of excellent workmanſhip. They are twelve miles in compaſs, and are fortified with ſemicircular towers twenty feet in diameter, and about a hundred and thirty diſtant from each other. At the top of theſe walls there is a walk built on arches, and at each tower is a ſtair-caſe leading to the battlements. The inner walls ſeem to be the work of the middle ages, are much ſtronger and higher than the outer, and are flanked with ſtately towers. The four gates face the four points of the compaſs, and are ſtill beautiful, though ſomewhat decayed. Out of the ruins and rubbiſh of the old city are frequently dug medals, coins, and other rarities; and the great variety of pillars, moſtly granite, with many fragments of columns of beautiful marble, are monuments of it's priſtine magnificence.

IN

In the caſtle of Cairo they pretend to ſhew the very priſon in which Joſeph was confined; and there is a well called Joſeph's, which travellers repreſent as a great curioſity. It takes it's name, not from the patriarch Joſeph, as is generally imagined, but from a grand vizier who had the direction of the work about ſeven hundred years ago. It is dug through the natural rock, the ſtone being ſoft; and has a ſtair-caſe that goes winding round it, above ſix feet wide, the rock being at leaſt half a yard thick between this paſſage and the well, which prevents people from falling. Holes are cut at proper diſtances to let in the light, and the deſcent is very eaſy, each ſtep being about ſix inches high, and five feet broad; but the place is ſo clogged with dirt, that the ſteps are ſcarce perceivable. Thus we deſcend to the bottom of the firſt part of the well, which is a hundred and fifty feet deep, when, turning a little to the right, we enter a chamber cut out of the rock, where oxen, by means of wheels, raiſe the water from the lower part of the well to the bottom of the upper part, from whence it is drawn to the top by other oxen above. This lower well is not ſo wide as the former, and the deſcent is difficult and dangerous, the ſtairs being narrow, wet, and dirty, and no partition between them and the well. It is a hundred and twenty feet deep, which added to the other number make two hundred and ſeventy; but travellers differ in their computations, ſome making the number much greater. This well is never empty, being probably lower than the bed of the Nile; but the water is brackiſh, and therefore not fit to drink; however, it ſerves for common uſes, and is diſtributed in pipes to different parts of the caſtle.

A SUPPLY

A SUPPLY of better water is brought to the caſtle from the river itſelf, by an aqueduct which makes a grand appearance, though uniformity has not been obſerved in building it, the arches and piers being of different dimenſions. At the north end of Old Cairo is a magnificent hexagonal building, ſaid to have been erected by one of the Mamaluke kings of Egypt. On the outſide of it there is an eaſy aſcent for the oxen to go up, which turn the wheels whereby the water is raiſed to the top of it from the reſervoirs below, into which it is let from the Nile by a channel cut for that purpoſe. Five oxen, and the ſame number of wheels, are employed in drawing up the water, which runs into a large baſon, and from thence into the aqueduct that conveys it to the caſtle. The arches of this aqueduct are about three hundred, Dr. Pococke ſays two hundred and eighty-nine, but others vary from theſe computations.

AT a little diſtance from the caſtle is a kind of ſuburbs called Caraffa, where there is a ſpacious burying-ground, and ſome magnificent tombs covered with cupolas, ſuppoſed to be the monuments of Egyptian kings, or of the caliphs, the relations of Mahomet, who conquered Egypt. The people have a great veneration for theſe tombs, and will not permit either Jews or Chriſtians to paſs by them without alighting from their aſſes, as a ſign of reſpect. They were formerly endowed with large revenues for the entertaiment of pilgrims that came to viſit them; but the greater part of that income has been taken away by the avarice of the baſhaws, and moſt of the edifices are gone to decay, and lie quite neglected. Caraffa was anciently a ſort of univerſity for the ſtudy of law and divinity, and had a vaſt number of colleges and convents; but great part of it is now in ruins.

THE

THE Jews have a ſynagogue at Cairo, remarkable for it's antiquity, it being built, according to their account, about ſixteen hundred years ago; and they have a tradition that the ſpot where they uſually read the law was honoured with the preſence of the prophet Jeremiah. They have abundance of ancient manuſcripts, and among the reſt they pretend to have one of their law written by the hand of Ezra; who having, as they ſay, omitted the name of God out of reverence wherever it ſhould have been written, found the vacancies miraculouſly filled up the day after it was finiſhed. This manuſcript they eſteem ſo ſacred that no-body is permitted to touch it, and it is kept in a niche nine or ten feet from the ground, before which a curtain is drawn, and lamps are continually burning.

BUILDINGS.

IT is obſerved by travellers, that the private buildings in the Turkiſh cities make but an indifferent appearance, and the obſervation holds particularly good with reſpect to thoſe of Cairo. The houſes of the common people are moſtly built of clay or bricks dried in the ſun, and are two ſtories high; but thoſe of the richer ſort are built of free-ſtone to a certain height, above which there is a kind of cage-work, ſometimes filled up with unburnt brick; and, as they have few or no windows towards the ſtreet, they look diſagreeably to any one who has been uſed to the manner of building in our cities, where the houſes have ſomething of beauty and regularity without, as well as conveniency and ornament within. Moſt of the houſes in Cairo have flat terraſſed roofs, where the inhabitants take the air in ſummer, which is very refreſhing in the evening; and thoſe of the richer peo-

have a baluſtrade round them, with abundance of fine carving, gilding, and other decorations.

THE beſt houſes in Cairo are built round a court or ſquare, and, notwithſtanding the meanneſs of their appearance, are elegantly furniſhed and adorned within. Over their halls, which are generally paved with marble, there are handſome cupolas, ſometimes open at the top to let in air; gold and azure gliſten in their principal apartments, the ſofas are furniſhed with rich velvet cuſhions, and the floors covered with the fineſt carpets, which are one of the chief manufactures of the city. The houſe ſaid to have been built by a ſultan of Egypt towards the end of the thirteenth century is very magnificent. The entrance to the grand apartment is by a fine old door, ſomewhat in the Gothic taſte, but chiefly remarkable for two pillars on each ſide of it, which appear like two links of a chain hanging down from the capital, though they are cut out of one ſtone. The grand ſaloon is in the form of a Greek croſs with a cupola in the middle of it, and is beautifully wainſcotted ten feet high from the floor. To the depth of two feet from the top it is covered with Arabic inſcriptions; and underneath them are works of mother of pearl and fine marbles, in the figure of ſmall arches; below which it is all done in pannels, with borders of Moſaic work running round them, compoſed of pearl, glaſs, and ſuch-like materials.

THE caſtle of Cairo, ſuppoſed to have been built by Saladin, is ſituated on a rocky hill, and looks like another city, being a mile and a half in circumference, and ſurrounded by thick and lofty walls, flanked with ſtately towers, after the ancient manner of fortification. On the weſt ſide of the caſtle are ſome very grand apartments, which

which display the magnificence of the Mamulake sultans, who resided there before Egypt was conquered by the Turks, and which have since been inhabited by the bashaws. Some of them are covered with domes, and adorned with Mosaic pictures; and even the doors are inlaid with mother of pearl, ebony, crystal, and other curious materials: But this part of the castle is now taken up by a great number of artificers who are employed by the government, chiefly in weaving, embroidering, and preparing the hangings and coverings that are annually sent to the temple at Mecca.

On the highest ground in the castle there is a spacious saloon, commonly called Joseph's Hall, which is now all open, except on the south side, and is supported by abundance of large columns of red granite, some of which have plain capitals, and other are good Corinthian. Round each pillar is engraven an Arabic sentence, and above them runs a sort of wooden frieze, filled with inscriptions in the same language. Those who have viewed this structure question whether it was ever finished.

The apartments of the bashaw or viceroy are now in a large court near the middle of the castle, and also the great Divan *, wherein are to be seen several leathern shields, each of them almost an inch thick, with a javelin sticking in them, wherewith they were pierced by one of the sultans, and are preserved as a monument of strength. The officers

* This name is given to a council-chamber, or court wherein justice is administered in the Eastern nations, particularly among the Turks. The word is also used for a hall in the private houses of the orientals.

under the baſhaw have alſo noble apartments in this citadel, which are kept in good repair, as well as the other buildings belonging to it, but the walls are running to decay.

THERE is an incredible number of moſques in Cairo, moſt of them poor little buildings; but ſome of them are magnificent fabrics, and deſerve the attention of a ſtranger.

IN the neighbourhood of Cairo, are alſo many moſques that may be reckoned ſtately ſtructures. One called Amrah, ſaid to have been formerly a Chriſtian church, has near four hundred pillars, and thoſe of ſuch various kinds, that they ſeem to have been collected from ſeveral ancient buildings. But the moſque which perhaps exceeds all the reſt, in the beauty of the architecture and the richneſs of it's ornaments, is one called Kubbe-el-Azab, from the Azabs or Azaphs, a body of Turkiſh infantry, to whom it belongs. The edifice indeed is but ſmall, it being about twenty yards ſquare; but it is covered with an elegant and majeſtic dome, raiſed on a baſe of ſixteen ſides, in each of which is a window. From the pavement to the height of eight feet it is lined with pannels of the choiceſt marbles, amongſt which are ſeveral pieces of red and green porphyry. A frieze that runs round it is filled with Arabic ſentences, cut in large gilt characters, and the borders of the pannels are likewiſe adorned with gilded ſculptures. The walls above the frieze are alſo decorated with inſcriptions in the ſame language, and the whole cupola is gilt and painted in the moſt curious manner. It's ornaments are a great number of glaſs lamps, oſtriches eggs, and other things of that nature, very common in the Mahometan temples.

THE Egyptian Chriſtians, called Cophti, or Cophts, have ſeveral churches in Cairo, where their patriarch

patriarch resides, though he takes his title from Alexandria, as well as that of the Greeks. The patriarchal Church, however, is properly that of St. Macarius in Old Cairo, where he is elected and inthroned; and in that town these Christians have ten or twelve churches, which generally consist of a nave and two isles, with galleries over them, and are adorned in the front with columns that support the roof. The chancel is separated from the body of the church by a partition, which is frequently embellished with sculptures, and inlaid with ivory, tortoise-shell, and other beautiful materials.

WHAT has been said may serve to give the reader some idea of the buildings in Egypt.

ARTS, MANUFACTURES, &c.

THE city of Cairo still continues to be a place of great commerce, though much less than it was before the discovery of a way to the East-Indies by the Cape of Good Hope. We have already taken notice that they have a manufactury of fine carpets at Cairo, and we may add, that they make great quantities of linen-cloth, which are exported to Italy, Algiers, and all the Turkish dominions.

IT is to be observed, that in most parts of Egypt, and even in Cairo itself, the curious mechanical arts are generally in the hands of the Christians. Such artificers as jewellers, silver-smiths, &c. are employed at Cairo, in making ornaments worn by the women *, and about the trappings of their horses.

* We are told that the women in Egypt, and other parts of the Ottoman empire, endeavour to make their apparel as rich

horſes. The Egyptian pebbles, uſed for the handles of knives, ſnuff-boxes, and other toys, are wrought and poliſhed at Cairo to perfection. Their turners are remarkable for making wooden lattices for windows, in a very curious and beautiful manner; and they alſo make ſome both of braſs and iron, of admirable workmanſhip, which they place before the windows of their moſques. Upon the whole, however, the preference is given to the artificers of Conſtantinople, and whatever is brought from thence is much eſteemed by the Egyptians.

THE inhabitants of Upper Egypt, if travellers relate the truth, have a very ſingular cuſtom, or art it may be called, that deſerves to be mentioned before we leave that country. They load a boat with hives of bees when the honey is all ſpent, and, falling down the river in the night-time, they ſtop in the morning at a place they think moſt proper for the bees to fly abroad and collect their wax and honey. When night comes on, and the bees are returned to the hives, they proceed on their voyage, caſting anchor again in the morning, and reſting all day, as before. By this means, it is ſaid, they arrive at Cairo in ſix weeks or two months, where they are ſure of finding a good market for the cargo collected by their induſtrious little animals.

THE method of hatching chickens in ovens is another curioſity for which Egypt is famous, and may be looked upon as an art peculiar to that

---

as poſſible, becauſe upon the death of the huſband, if there are any children, the law allows the widow nothing more than her cloaths, jewels, and other equipage, unleſs particular donations have been made her; ſo that they are frequently ſold to maintain the poor woman after her huſband's deceaſe.

country;

country; nay, some pretend that only the people of one village are masters of the business, who, at the proper season of the year, disperse themselves all over Egypt for employment, there being scarce a town but what is provided with ovens for this purpose. The season for producing fowls after this manner is from January to April, while the weather is temperate, for at other times the heat is too violent. The ovens are built under ground in two opposite rows, with a gallery or passage between them; and they are raised one above another, with holes at the top, as there are likewise in the passage, which they open or stop as they would have the heat diminished or augmented. The fuel they use to heat these ovens is dung and chopped straw which makes a smothering fire, the smoke whereof is very offensive. They continue to heat them gently for eight or ten days together, and then bring the eggs from the lower cells, where they have lain in heaps, and spread them in the upper apartments, so as only to cover the floor, and not lie one upon another. The business is now to turn them every day, and keep a moderate fire in a channel that runs along near the mouth of the ovens; and indeed the art consists chiefly in giving the ovens a proper degree of heat, neither too much nor too little, for in either case the labour would not succeed. Their general rule is, that the eggs be never made hotter than a man can bear them to be applied to his eyelid. Thus with good management they begin to hatch in about three weeks, at which time it must needs be entertaining to take a view of these places, and to observe some of the chickens just putting forth their heads, others half out of the shell, and others quite delivered from their confinement. — Thunder, it is said,

ſaid, ſometimes occaſions great numbers of eggs to miſcarry; and, at the beſt, it is obſerved that many of the chickens want a claw, or have ſome defect or other, which, perhaps, they would not have had, if they had been hatched in the natural way. — The maſter of the ovens, according to Mr. Greaves, has one third of the eggs for his pains and charges, out of which he is to make good to the owners any of their number that may happen to be broken or miſcarry. In this manner ſeven or eight thouſand chickens are hatched in a ſhort time. It has been doubted whether this method of hatching chickens was practicable in any country beſides Egypt, the nature of the climate being ſuppoſed particularly favourable to that deſign; but the ſame experiment has been made with ſucceſs in France, Italy, and other parts of Europe.

The End of VOL. IV.